

OCTOBER 1912.]

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PROCEEDINGS
OF THE
LINNEAN SOCIETY OF LONDON.



124TH SESSION.

FROM NOVEMBER 1911 TO JUNE 1912.

LONDON:

PRINTED FOR THE LINNEAN SOCIETY,

BURLINGTON HOUSE, PICCADILLY, W.,

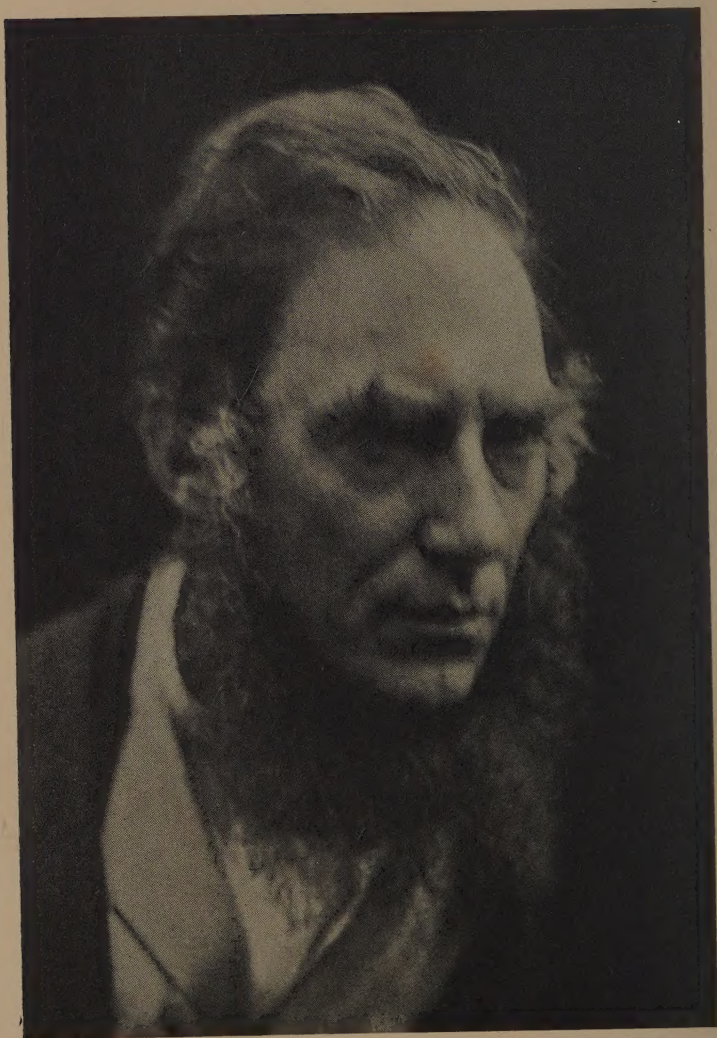
BY TAYLOR AND FRANCIS, RED LION COURT, FLEET STREET.





To face Title.]

Proc. Linn. Soc., Session 1911-1912.



JOSEPH DALTON HOOKER
at the age of 51.

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SUPPLEMENT.

Index to the Linnean Herbarium.

PUBLICATIONS: SESSION JULY 1911-JULY 1912.

Journal, Botany.

Vol. XXXIX.	No. 273.	7/-
	„ 274.	12/-
Vol. XL.	„ 275.	22/-
	„ 276.	18/-
	„ 277.	7/-
	„ 278.	(Sept.)
Vol. XLI.	„ 279.	14/-

Journal, Zoology.

Vol. XXXI.	No. 208.	18/-
Vol. XXXII.	„ 211.	8/-
	„ 212.	5/-

Transactions, Botany.

Vol. VII.	Part 16.	3/-
	„ 17.	8/-
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Transactions, Zoology.

Vol. XI.	Part 8.	4/-
	„ 9.	2/6
	„ 10.	2/6
Vol. XIV.	„ 2.	20/-
	„ 3.	28/-
	„ 4.	5/-
Vol. XV.	„ 1.	29/-

Proceedings, 123rd Session, October 1911.

List of [Fellows, Associates, and Foreign Members], Nov. 1911.

PROCEEDINGS
OF THE
LINNEAN SOCIETY OF LONDON.

(ONE HUNDRED AND TWENTY-FOURTH SESSION,
1911-1912.)

November 2nd, 1911.

Dr. D. H. SCOTT, M.A., F.R.S., President, in the Chair.

The Minutes of the General Meeting of the 15th June, 1911,
were read and confirmed.

Mr. William Neilson Jones, M.A., Mr. Charles Waterfall, and
Mr. Richard Siddoway Bagnall were admitted Fellows.

Mr. James Wales Audas, Mr. Claude Keith Bancroft, B.A.,
William John Dakin, D.Sc., Miss Ruth Mary Cardew, Mr. John
Hughes, Thomas Harvey Johnston, M.A., D.Sc., Robert Laurie,
M.B., Ch.B. (Glasg.), B.Sc. (Edin.), William McRae, B.Sc., Sir
Frederick William Moore, M.A., M.R.I.A., Dr. Annie Porter,
B.Sc. (Lond.), Albert Malins Smith, M.A. (Cantab.), Miss Edith
Layard Stephens, B.A. (Cape), Miss Elsie Maud Wakefield, and
Alfred James Wilmott, B.A. (Cantab.), were proposed as Fellows.

The PRESIDENT read the following reply by Sir JOSEPH HOOKER,
in response to the letter of congratulation sent to him from the
General Meeting of the 15th June:—

The Camp, Sunningdale,
[25th June, 1911.]

MY DEAR PRESIDENT,

The warm congratulations with which I have been greeted
by my fellow-members of the Linnean Society on the approach
of my 94th birthday have moved me more deeply than I can
express. From no other association of scientific labourers could

greetings be so welcome to me, because of the esteem and affection I feel for the Society as one of its oldest members and because of my descent, as grandson and son of two of its earliest.

Requesting you to make known to my fellow-members my hearty appreciation of their affectionate congratulation and my own best wishes for the continuation of its increasing prosperity,

Believe me, sincerely yours,

(Signed) JOS. D. HOOKER.

*The President,
Linnean Society.*

Dr. A. B. RENDLE, V.-P., having taken the Chair:—

Dr. D. H. SCOTT gave an account of the Palæozoic Fern, *Zygopteris Grayi* (Williamson). (Subsequently published in the 'Annals of Botany,' vol. xxvi. no. ci, 1912, pp. 39-67, 5 pls., 1 fig.)

Dr. Rendle having spoken on the subject of the paper, left the Chair, and the President resumed.

A paper, by Miss EDITH E. BAMFORD, entitled "Pelagic Actinian Larvæ," and communicated by Prof. J. Stanley Gardiner, F.R.S., F.L.S., was read in abstract.

Mr. ALFRED O. WALKER contributed a paper on "The Distribution of *Elodea canadensis*, Michx., in the British Isles in 1909." (Abstract, p. 71.)

A discussion followed, in which the following took part:—Mr. James Groves, Mr. E. M. Holmes, the Rev. T. R. R. Stebbing, Prof. J. W. H. Trail, Dr. Margaret Benson, Mr. H. N. Dixon, Mr. J. C. Sheenstone, Prof. A. Dendy, Dr. O. Stapf, Mr. Henry Groves, Dr. A. B. Rendle, and the President.

Dr. JAMES MURIE exhibited sets of specimens of the "Slipper Limpet" (*Crepidula fornicata*), the shells themselves in graduated series and living examples attached to oysters, mussels, &c. These were obtained in the Essex waters, by dredging, and from shallow muddy shore tracts.

The "Limpets" have now become a nuisance on the oyster-beds of Kent and Essex. Originally they were introduced from America, among the barrelled oysters brought over for relaying. They have since become thoroughly naturalised, and on the Blackwater and River Crouch are dredged up in tons, attached to the oysters, mussels, &c.

Unlike the Starfish, devourers and arch-enemies of the oyster, the Mussels, which literally smother them, or the Whelk Tingles, which bore through their shells, the "Slipper Limpet" is more of a commensal parasite and messmate, partaking of the oyster's food.

The labour and expense involved in constant dredging for them

renders them a serious menace to oyster-culture, as likewise the necessity for individually chopping them off by "cultack" before the oysters are presentable for sale.

Prof. A. Dendy and the President made remarks, and Dr. Murie briefly replied.

Mr. ALFRED O. WALKER exhibited *Clerodendron trichotomum*, Thunb., in fruit, a result of the past abnormal summer, explaining that, although the plant frequently flowered in England, this year is the first time it had fruited, the same occurrence being also observed at Kew.

Mr. R. S. BAGNALL briefly referred to three interesting captures he had lately made in the county of Durham, namely, species of *Diplopora* and *Pauropoda*, and of *Protura* first recorded as British.

November 16th, 1911.

Dr. D. H. SCOTT, M.A., F.R.S., President, in the Chair.

The Minutes of the General Meeting of the 2nd November, 1911, were read and confirmed.

Mr. James McCrone Douie, C.S.I., Mr. John William Haigh Johnson, B.Sc., and Miss Beatrice Lindsay, were proposed as Fellows.

Dr. REGINALD R. GATES, M.A., Ph.D., then gave the main outlines of his paper, communicated by Dr. Marie Stopes, F.L.S., on "Certain aspects of the Mutation Problem in *Oenothera*." He stated that:—

Work with the *Oenotheras* has developed in several directions, all bearing on the general question of the place to be assigned to mutation as an evolutionary factor. An investigation of the behaviour of the *Oenotheras* in heredity and variation from several points of view, gives a broader basis for the interpretation of the evolutionary significance of these phenomena than has hitherto been possible in most other genera.

The cytological evidence shows that in most of the mutants from *Oenothera Lamarckiana* the chromosome number is unchanged, but in the mutant *O. gigas* it is doubled. Hence mutants originate in various ways. Evidence tends to show that the chromosome doubling in *O. gigas* probably occurred either in the fertilized egg, or in a megaspore mother-cell which afterwards developed apogamously.

On the other hand, in certain cases the mutational change probably occurs during the reduction divisions. Thus *O. rubricalyx* is a mutant from *O. rubrinervis* which produces an extreme

amount of pigment; and when crossed with the parent type the new character behaves as a Mendelian dominant, and so as to show that the original mutant individual was heterozygous and probably originated from a cross between a germ-cell in which the new dominant character appeared and one in which it was lacking.

From this and much other evidence, mutation in *Oenothera* appears to be due to a general condition of germinal instability, which in turn is probably connected with crossing in the ancestry. This, however, by no means deprives it of evolutionary significance, for all open-pollinated species of plants are hybrids in the sense that various races have participated in their immediate ancestry.

The paper, which was illustrated by lantern-slides, was discussed by Dr. Helen Fraser and the President, the author replying.

Mr. G. CLARIDGE DRUCE, in his exhibition entitled "Some Floristic results of the International Phytogeographic Excursion through the British Isles" during the past summer, gave an account of the places visited during the five weeks spent on the tour, and touched on the species and varieties discovered. (Abstract, p. 77.)

Dr. C. E. Moss (visitor), the Rev. T. R. R. Stebbing, Mr. William Fawcett, and Mr. J. C. Shenstone discussed certain points raised, and Mr. Druce replied.

Mr. ARTHUR W. HILL showed drawings of a viviparous specimen of *Juncus bufonius*, in which the seedlings were seen emerging from the parent capsule.

Mr. N. C. MACNAMARA contributed some remarks on "Mutations in Foxglove plants," which was communicated by Prof. A. DENDY, and read by the General Secretary, as follows:—

The following record is intended to supplement the communication made to the Linnean Society, on my behalf, by Prof. A. Dendy, F.R.S., on the 16th of June, 1910, concerning mutations in certain Foxglove plants grown at Chorley Wood, Herts.

From a packet of Foxglove seeds (*Digitalis purpurea*) sown in the year 1906, fifty-four plants were, in June 1907, planted in a shrubbery of fir-trees with an undergrowth of laurels. Of these plants fifty-one grew into normal Foxgloves, but the three remaining plants were sports which we may distinguish by the letters A, B, and C.

A. In this plant the flowers of the lower half of the stem possessed only a bifid upper petal and seven stamens united at their bases. The flowers of the upper part of the spike were normal.

B. A fine, well-grown plant $4\frac{1}{2}$ feet high; throughout the

whole length of the spike the flower consisted of a bifid upper petal, seven stamens, and style. The upper part of this spike was isolated; it produced abundant self-fertilized seed.

C. The spike of this plant grew to be 5 feet high; from base to apex its flowers consisted of nine stamens and a style, with no vestige of petals.

It is unnecessary to follow the history of plant A, as it was only the lower part of the spike in which the flowers were abnormal, and the stem was not isolated.

Seed taken from the upper covered part of the plant B (described above) germinated abundantly; twenty-one of these plants flowered in 1909. Of these twenty-one plants thirteen produced spikes of the parent type, and eight produced normal Foxglove flowers. One of the thirteen plants grew to be 5 feet 1 inch high, its spike producing one bifid petal and a style; but its terminal flower consisted of twenty-two stamens and a large flask-shaped carpel (divided into seven compartments) and style, but having no corolla, that is, it had no petals. (As shown in photograph exhibited.)

The season of 1909 was sunless with constant rain; consequently, all covered plants suffered much from mildew, but I managed to collect some self-fertilized seed from the terminal flower of the plant referred to, and this seed germinated and flowered in 1911. Every one of the twelve plants I reared from the seed of the terminal flower produced flowers precisely like the parent. Two of these plants were isolated and their self-fertilized seed germinated freely (September, 1911).

The seed originally collected from the covered part of plant C of 1907, had produced plants which in 1909 gave flowers precisely similar to the parent plant; self-fertilized seed from these plants (1909) in 1911 produced plants exactly like those of 1907, *i.e.*, flowers having nine stamens and a style but no petals; self-fertilized seed from these plants are now (September, 1911) germinating freely. Some of the plants of 1909, however, in place of a tall single spike grew some seven or eight shorter spikes, each flower of which had nine stamens but no petals.

It seems that a certain number of the Foxglove seeds sown in the year 1906 contained elements in a condition such as that described by de Vries as being "impressed by an impulsive mutability," for some of the flowers produced by these seeds were sports. Seeds from these sports produced their like in 1909; and, further, these latter plants produced some terminal flowers totally differing in character from the parent sport from which they were derived. Seeds from these terminal flowers produced their like in the year 1911; so that I have now two different strains of Foxglove plants produced from the seeds sown in 1906, and these strains have been produced from self-fertilized flowers, that is, from flowers carefully protected from insects or other means of cross-fertilization. If other observers would record their

experience as to the behaviour of sports of this kind, in the course of time we might hope to possess data sufficient to enable us to form some reasonable idea as to the frequency, and above all, the permanency of such mutations in wild types of plants.

December 7th, 1911.

Dr. D. H. SCOTT, M.A., F.R.S., President, in the Chair.

The Minutes of the General Meeting of the 16th November, 1911, were read and confirmed.

Mr. Frank Evans, Mr. George William Howes, and Dr. Ralph Vincent were proposed as Fellows.

Mr. James Wales Audas, Mr. Claude Keith Bancroft, B.A., Miss Ruth Mary Cardew, William John Dakin, D.Sc., Mr. John Hughes, John Harvey Johnston, M.A., D.Sc., Robert Laurie, M.B., Ch.B. (Glasg.), B.Sc. (Edin.), William McRae, B.Sc., Sir Frederick William Moore, M.A., M.R.I.A., Dr. Annie Porter, B.Sc. (Lond.), Albert Malins Smith, M.A. (Cantab.), Miss Edith Layard Stephens, B.A. (Cape), Miss Elsie Maud Wakefield, and Alfred James Wilmott, B.A. (Cantab.), were elected Fellows.

Mr. H. N. DIXON read his paper entitled "On some Mosses of New Zealand."

Dr. GEORGE HENDERSON then showed a series of more than 70 slides, taken during an official mission through Kashmir, Little Tibet, and Turkestan in 1870. The original photographs had been lost sight of, but having recently been discovered in the keeping of a friend, lantern-slides had been made from them, and were now shown, with explanations by the author. He traced the progress of the expedition from Lahore to Yarkand, where the series ended.

Dr. Stapf and the President commented on the interest of the exhibition, and the botanical results obtained 40 years ago.

Dr. HENDERSON also showed three variations in the foliage of *Alnus glutinosa* from the banks of the River Darent, in full view of his house, and explained that these differences corresponded with varying dates of leafing, leaf-fall, and fruiting.

The President spoke on the changes induced by trees and shrubs being cut back, the luxuriance of the new growth making it almost unrecognizable, as in a case observed at Oakley, when it was found that *Rhamnus cathartica* had assumed a new form owing to severe coppicing. Mr. J. C. Shenstone also spoke.

Dr. A. B. RENDLE showed a fine specimen of a viviparous *Poa trivialis*, Linn., found by Mr. Miller Christy at Stisted, near Braintree, in Essex. The normal inflorescence was almost entirely replaced by a mass of vegetative outgrowths replacing the flowers.

A discussion followed, in which Dr. Stapf, Mr. H. N. Dixon, and Mr. W. C. Worsdell took part.

December 21st, 1911.

Dr. D. H. SCOTT, M.A., F.R.S., President, in the Chair

The Minutes of the General Meeting of the 7th December, 1911, were read and confirmed.

The President then spoke of the loss sustained by the Society since its last meeting in the death of Sir JOSEPH HOOKER, beyond doubt their most distinguished Fellow. He was elected June 7, 1842, over 69 years ago, and served on the Council, with only short intermissions, from 1846 to 1884; he was Vice-President during a great part of that time, and exercised considerable influence on the affairs of the Society, though, unfortunately, never President. Much of his best work, so far as it was not in book-form, was published by the Society; his memoirs on the Flora of the Galapagos Islands, the distribution of Arctic plants, and the classic memoir on the unique plant, *Welwitschia mirabilis*, were mentioned. His last paper published in our Transactions was on the Rubber plant, *Castilloa*, 25 years back. The Society hoped to have the honour of publishing his latest work, on the genus *Impatiens*, upon which he was actively engaged during the last years of his life, till very near the end.

Sir Joseph was the acknowledged leader in systematic, and above all, in geographical botany. His contributions to fossil botany were of great value: by the world at large, he would be best known for his close association with Darwin and with the development of the Darwinian theory.

The following Resolution was then moved from the Chair:—

The Fellows of the Linnean Society of London in General Meeting assembled, desire to place upon record their profound sense of the loss to the Society and to the World of Science, occasioned by the death of Sir JOSEPH DALTON HOOKER on the 10th December, and their pride in his having been a Fellow of the Linnean Society for nearly 70 years, during which by his scientific contributions to the Society's publications and his advice throughout his many years of service on the Council, he so greatly added to the prestige and efficiency of the Society.

They desire also to express their deepest sympathy with Lady Hooker and the family in their bereavement.

That a copy of the foregoing Resolution be communicated to the family by the General Secretary.

The Resolution was carried unanimously, the Fellows rising in their places.

The President then announced that a vacancy existed in the List of Foreign Members by the recent death of Dr. Jean Baptiste Edouard Borner, F.M.R.S., and that two vacancies had arisen in the List of Associates, by the death of Mr. Oswald Arthur Sayce, and the election as Fellow of Sir Frederick William Moore, M.A.

Miss Ruth Mary Cardew, the Rev. Hilderic Friend, and Miss Elsie Maud Wakefield, were admitted Fellows.

Sir James M'Crone Douie, K.C.S.I., Mr. John William Haigh Johnson, B.Sc., and Miss Beatrice Lindsay, were elected Fellows.

The Rev. HILDERIC FRIEND, F.L.S., then read his paper, entitled "Some Annelids of the Thames Valley," which was discussed by Prof. A. Dendy, Sec.L.S., and the Rev. T. R. R. Stebbing; the author briefly replying.

Mr. W. C. WORSDELL, F.L.S., then gave a lantern exhibition of a series of slides, showing abnormalities in fungi, and explained his views on the causes which produce them. Prof. F. O. Bower, Prof. D. T. MacDougal (visitor), the Rev. T. R. R. Stebbing, Prof. A. Dendy, Sec.L.S., Dr. Stapf, Sec.L.S., Miss E. M. Wakefield, Miss E. N. Thomas, and the President joined in a discussion, and the exhibitor replied.

Dr. A. B. RENDLE, F.R.S., F.L.S., showed specimens obtained in 1911, of the dissected leaf-form of Horseradish, *Cochlearia Armoracia*; in his absence, the following statement was read for him by the General Secretary:—

"It is not suggested that the dissected form of leaf of Horseradish is new; it will be familiar to many Fellows. The leaf-tissue between the veins is undeveloped to a greater or less degree, and a more or less cut form of leaf results. I should like to ask whether this form has been more generally noticed during the past remarkably sunny summer. It might be suggested that it is a response to an increased amount of sunlight or diminution of water-supply. The specimen which I am showing came from a dry field, about a mile from the sea, at Bognor, in which a number of the plants were growing here and there, and nearly all of them showed the phenomenon in a greater or less degree. I noticed the same dissected leaf-form in other places this summer.

"Miss Ida M. Roper, F.L.S., has sent a specimen from Somerset, and her letter may be worth reading to the Fellows."

The letter, dated the 20th December, was accordingly read.

Dr. Stapf then referred to one or two points suggested by the specimens.

January 18th, 1912.

Dr. D. H. SCOTT, M.A., F.R.S., President, in the Chair.

The Minutes of the General Meeting of the 21st December, 1911, were read and confirmed.

Miss Alice Pegler was proposed as an Associate.

Mr. Frank Evans, Mr. George William Howes, and Ralph Vincent, M.D., M.R.C.P., were elected Fellows.

Dr. A. ANSTRUTHER LAWSON, F.L.S., gave a lantern lecture entitled "Some features of the Marine Flora at St. Andrews," showing the wealth of algal vegetation at that part of the coast, and its special characteristics, including the habit of the plants when growing in their natural position under water. Illustrations of the gigantic Brown Algae of the Pacific Coast were also shown for comparison.

The lecture was discussed by Miss A. L. Smith, Mr. J. C. Shenstone, Prof. F. E. Fritsch, Mr. A. D. Cotton, and the President, the lecturer replying to various questions.

Miss E. L. TURNER, F.L.S., then showed a series of lantern-slides illustrating her discovery last year of a nestling Bittern in Norfolk on the 8th July, 1911. The slides were from photographs taken by the author, and showed the young bird in its protective attitude simulating a bundle of reeds, and the nest itself.

The narrative showed that probably more than one young bird had been hatched, and that the fledgling found was the last of the brood, and the older birds had been induced by the parents to quit the neighbourhood of the nest and scatter amongst the reeds of the marsh. It is gratifying to record the recurrence of this interesting species in a county in which it was formerly common, and it is hoped that it may re-establish itself in its old haunts.

The Rev. T. R. R. Stebbing, F.R.S., added some remarks, congratulating Miss Turner on her success as an observer.

The General Secretary read a letter from Dr. George Henderson, accompanying a quantity of seeds of *Nannorrhops Ritchiana*, H. Wendl., which the sender wished should be tried in cultivation in the South of England by as many persons as possible. He stated that these seeds were of last summer's growth, and came from the Khyber Pass, where snow sometimes covered these palms in winter, whilst the summer is very hot. He further suggested

that heat might be requisite to cause the seeds to germinate freely.

The seeds were accordingly distributed amongst those present at the meeting.

February 1st, 1912.

Prof. E. B. POULTON, F.R.S., Vice-President, in the Chair.

The Minutes of the General Meeting of the 18th January, 1912 were read and confirmed.

Dr. Ralph Vincent was admitted a Fellow.

Mr. Charles Cumming Calder, B.Sc., Mr. Thomas Alfred Dymes, Mr. Thomas Maldon Fitch, Miss Clara Ethelinda Larter, Miss Maud Samuel, B.Sc., and Mr. David George Stead, were proposed as Fellows, and Mr. Arthur Patterson and Mr. Charles Davies Sherborn for the vacant Zoological Associateship.

Mr. F. N. WILLIAMS regretted the present method of postponing exhibitions, which produced the greatest amount of discussion, to the reading of papers of mere formal importance, with the consequent inconvenience to those Fellows who, living at a distance, had to leave early on account of their trains.

The Vice-President in the Chair pointed out that the matter was actually before the Council, and Mr. Williams's remarks would receive attention; and Prof. Dendy, Sec.L.S., explained the reason why the alteration had been tried.

The following five papers, relating to the fauna of the Seychelles and other islands of the Indian Ocean, were communicated by Prof. J. STANLEY GARDINER, F.R.S., F.L.S.:—

1. M. A. FOREL.—Fourmis des Seychelles et des Aldabras, reçues de M. Hugh Scott.
2. Mr. F. W. EDWARDS.—Tipulidæ.
3. Dr. GÜNTHER ENDERLEIN.—Sciaridæ.
4. Mr. CLAUDE MORLEY.—The Ichneumonidæ.
5. C. TATE REGAN, M.A.—New Fishes.

The Vice-President in the Chair, Prof. Dendy, Sec.L.S., the Rev. T. R. R. Stebbing, and Prof. W. A. Herdman contributed some remarks on the value and importance of the results thus briefly summarized.

The Rev. R. ASHINGTON BULLEN, F.L.S., exhibited a snail found by him at Porto Pi, near Palma, Mallorca, in March 1909. Its shell puzzled him, because it had composite characters allying it on the

one hand to *Helix aspersa*, O. F. Müll., and on the other to *Otala vermiculata* (O. F. Müll.), both common Lusitanian forms. The Rev. E. H. Bowell having examined the anatomy of the animal itself, found that its radula partook of an intermediate character, showing affinities to the species named above, and the absence of certain organs argued its hybridity.

A discussion followed, in which the following took part:—Prof. Poulton, Mr. Alfred Santer Kennard (visitor), and the Treasurer.

Rev. R. ASHINGTON BULLEN also exhibited new engravings, enlarged 12 diameters, of *Hygromia montivaga*, Westerlund. This land-mollusc was found at Harlyn Bay, Cornwall, in 1902, in a prehistoric cemetery of late Keltic date. He had found about 40 specimens in all. It is a member of the Lusitanian fauna, and, so far, only found in England in the above locality. The exhibitor adduced evidence to show that it was certainly of pre-Roman date (dying out in the early Iron Age), he having obtained it from a probably Pleistocene horizon in previously undisturbed brown sandy clay, the upper disintegrated layer of the Ladock Beds (Devonian Slates). The place where he so found it had not been dug into for the purpose of burial. It also occurred in the brown sand in which the late Keltic burials were placed, but not in the 12 or 13 feet of bright shell-sand beneath the top soil and above the interments. Roman remains (a coin of the younger Faustina) had occurred in the neighbourhood no deeper than plough-depth.

The following joined in the discussion upon this exhibition:—Prof. Dendy, Sec.L.S., Mr. A. S. Kennard (visitor), the Treasurer, Mr. J. C. Shenstone, Mr. Hugh Findon, Dr. Otto Stapf, Sec.L.S., Mr. F. N. Williams, Dr. Marie Stopes, and Prof. Poulton, the exhibitor replying.

The General Secretary brought forward a communication from Herr PAUL SCHERDLIN, as follows:—

“For hundreds of years pigeons have nested on the spire of Strassburg cathedral. They increased so much that many attempts have been made to extirpate them, but in vain. During the last few years there has been a sudden and startling diminution in the number of these cathedral pigeons.

“I am of opinion that this manifest reduction is due to the asphaltting of the streets round the cathedral. Between the stone sets of the pavement the pigeons were able to pick up food in quantity. In consequence of the asphaltting, and daily watering and cleansing of the places in the immediate neighbourhood, the birds have gone.

“Has a similar case been observed elsewhere?”

The Rev. R. Ashington Bullen, Prof. Dendy, Mr. Henry Bury, and Mr. Charles Oldham (visitor) spoke on the subject,—the last

speaker referring to the lessened number of pigeons in certain parts of London, due to the increase of motor traffic and corresponding decrease of horses, the birds thus losing their chief source of food from scattered horse-feed.

The General Secretary then brought forward a communication entitled "Additional Information concerning Linné's Lapland Drum." He stated that on the 2nd February, 1911, he showed some lantern-slides concerning Roslin's portrait of Carl von Linné (Proc. 1910-11, p. 2, plate), followed by some remarks on the Lapp drum which figures in the Hoffman portrait and on the titlepage of the '*Flora Lapponica*.'

Immediately upon the printed account of this exhibition reaching Sweden, two correspondents wrote to him about it, and one of them, Dr. J. M. Hulth, of Uppsala, was so kind as to enclose a reprint of an article by Dr. Edgar Reuterskiöld, on the Linnean Lapland magic drum, from which the following information is taken.

The information printed in the Proceedings for last year (pp. 60-61) represented the ascertained facts up to the Bicentenary of Linné in May 1907. But enquiry was afterwards made as to what had become of the Linnean drum, and it resulted in the discovery of its history as follows:—The drum formed part of a large collection of curiosities which was bought by the University of Upsala in 1832 on the death of Thunberg's pupil and botanical demonstrator, C. P. Forsberg. In 1874 the University, not knowing its interesting history, presented it to the Royal Academy of Science, Stockholm, whence, in 1883, it passed to the Trocadéro Museum, in Paris, in exchange for some Peruvian curiosities.

It now seems certain that Linné received the magic drum from Pite Lappmark, as it agrees with the design of others from that part, and differs from the form of those from Kimi and Torne Lappmark; it has certain figures used in the district of Åsele. We may expect a detailed account of the drum in question from Dr. Reuterskiöld, who is occupied in an exhaustive review of all known specimens.

The Treasurer referred to the interest of this exhibition, specially with regard to the local variations in the pattern of the drums.

The General Secretary also read a letter from Sir E. RAY LANKESTER, K.C.B., F.R.S., referring to certain developments on the part of '*The Field*' newspaper, as enlisting the help of sportsmen and country gentlemen for natural history.

Mr. John Hopkinson also contributed some remarks on the illustrations shown in support of the letter.

February 15th, 1912.

Dr. D. H. SCOTT, M.A., F.R.S., President, in the Chair.

The Minutes of the General Meeting of the 1st February, 1912, were read and confirmed.

Mr. Albert Malins Smith, M.A., was admitted a Fellow.

Mr. Richard Higgins Burne and Prof. Augustus Daniel Imms, B.A., B.Sc., were proposed as Fellows.

Miss Alice Pegler was elected an Associate.

With reference to remarks made at the last General Meeting, the President read the following Resolution which had been adopted by the Council:—

“That it be the duty of the Secretaries to arrange the Agenda of the Exhibitions and Papers for each meeting in such a way as may in their discretion best contribute to the interest and convenience of the Fellows attending the Meeting.”

Mr. ROBERT HAROLD COMPTON, M.A., read a paper, communicated by Prof. A. C. SEWARD, F.R.S., F.L.S., entitled “An Investigation of the Seedling Structure in the Leguminosæ.”

A discussion followed, by Miss E. N. Thomas, Mr. T. G. Hill, Dr. Ethel de Fraine, Mr. A. G. Tansley, the President, Dr. Otto Stapf, Sec.L.S., and Mr. Ernest Lee, the author replying.

Mr. C. E. SALMON exhibited an abnormal *Orchis* with enlarged drawings of the flowers, with the following note:—

On April 23rd, 1911, Mr. P. H. Mitchiner gathered this remarkable specimen on the chalk downs above Reigate and brought it to me for determination. At a first glance, *Habenaria viridis* or *Herminium Monorchis* might be suggested as a name, for the stem was about 4 inches high, with a spike of small greenish-yellow flowers.

A close examination soon dispelled such an idea, and I saw at once that the specimen was unlike any British wild Orchid. Knowing that Mr. W. B. Hemsley had studied various species of this Order very closely, I at once packed up the specimen and despatched it to him. I cannot do better than read the careful report he made upon it, only regretting that he is unable to be present to-night to explain personally the various points. He writes:—

“Although none of the flowers attained full development, some of them grew out sufficiently for analysis and recognition of the parts. Briefly, the flowers present several peculiarities. In the

first place, they have three spurs, the additional pair being sepaline; agreeing in this respect with the three-spurred *Platanthera* that I exhibited before the Linnean Society, Jan. 17, 1907, and differing from the three-spurred *Platanthera* exhibited March 19, 1908, in which the additional spurs were petaline; these two conditions affording examples of false and true peloria respectively. Both specimens of *Platanthera* contained fully developed normal pollinia; your plant, none. The structure of the flowers of your plant is as follows:—Scape with one appressed leaf. Flowers yellowish, crowded, not fully developed and only about one-third of an inch long. Bracts longer than the ovary, shorter than the flower. Flowers 3-spurred, the additional spurs produced by the two lateral sepals, and somewhat thicker than the labellum spur. Spurs equal or unequal in length. Labellum considerably larger than the sepals and petals, narrow in the basal half and nearly orbicular in the distal half, entire or irregularly 5-toothed. Sepals and petals otherwise similar. Genitalia quite rudimentary with no trace of pollinia.

"The floral structure of this anomalous orchid, especially the shape of the different organs, and its sterile nature, would lead one to suppose it to be of hybrid origin. But its early appearance and its small size make it difficult to suggest a probable parentage. The shape of the labellum points to *Orchis* and I suggest some connection with *O. Morio*; yet the resemblances go no further. I sent the drawings to my friend Dr. Focke, and he replied that he could say very little about it but referred me to a Swiss record, which he had not seen, of an anomalous *O. Morio*, as a possible clue."

The suggestion of Dr. Focke (whose letter is upon the table) is not very helpful, as the plant to which he refers proved to be a 3-lipped and 3-spurred *Orchis Morio*. The plants associated with this abnormal *Orchis* on the Reigate Downs include *Orchis mascula*, *O. Morio* (sparingly), *O. ustulata* (sparingly), *Aceras*, and, not far away, *Habenaria bifolia*; but of all these, *O. mascula* would be the only species in flower on such an early date as April 23rd.

I may mention that Mr. Hemsley showed the drawing at a meeting of the Scientific Committee of the Royal Horticultural Society on Aug. 29, 1911, but no conclusion was arrived at. I should be very glad to hear any suggestions as to the origin of the plant.

Mr. HUGH FINDON showed a series of Glass-sponges from Japan. He stated that these sponges had been lately given to him by a gentleman who received a number of them some years ago from a naturalist in Japan.

He stated that they were of two species, *Hyalonema Sieboldii* and *H. apertum*, and were dredged in ten to fifteen fathoms of water off the East Coast of Japan. One specimen had been cut in order to see the connection between the stalk, or "rope,"

and the sponge proper. The lower ends of the strands of the "rope" are barbed in a peculiar manner, as may be seen under the microscope.

Slides of the spicules were also shown under the microscope, of which there seem to be a great variety, the most noteworthy being the double-ended, six-bladed, battleaxe-form and the four-rayed star with the barbed spur. There also appears to be a smaller double mushroom anchor form and many straight spines. The spicules polarize light but slightly, and appear to have an organic nucleus or centre core.

Prof. A. Dendy, Sec.L.S., spoke on the history of these sponges, and the original erroneous ideas entertained concerning their nature and mode of growth. He further displayed illustrations from various sources in support of his statements.

March 7th, 1912.

Dr. D. H. SCOTT, M.A., F.R.S., President, in the Chair.

The Minutes of the General Meeting of the 15th February, 1912, were read and confirmed.

Mr. Alleyne Leechman and Dr. Charles Edward Moss were proposed as Fellows, and Dr. Hermann Christ-Socin as a Foreign Member.

Mr. Charles Cumming Calder, B.Sc., Mr. Thomas Alfred Dymes, Mr. Thomas Maldon Fitch, Miss Clara Ethelinda Larter, Miss Maud Samuel, B.Sc., and Mr. David George Stead were elected Fellows.

The names of Mr. Arthur Patterson and Mr. Charles Davies Sherborn were submitted to a ballot for the vacant Zoological Associateship. The ballot having been closed, the President nominated Mr. A. D. Michael, Dr. W. T. Calman, and Dr. A. P. Young, Scrutineers; these having examined the Ballot-papers and reported to the President, he declared that Mr. Charles Davies Sherborn had been elected an Associate.

The President announced the death of Mr. Alfred Fryer, A.L.S.

Prof. PERCY GROOM read a paper entitled "Note on the Internodes of *Calamites*."

A discussion followed, in which the following took part:—Prof. F. W. Oliver, Dr. Marie Stopes, Mr. Clement Reid, and the President, the author replying.

Miss ETHEL M. PHILLIPS exhibited a portfolio of water-colour drawings, and explained that they were made during a recent

visit to Barbados, West Indies, between November 1908 and May 1911. "I had been greatly struck by the profusion and brilliance of the flora of the Island, and having tried to make a collection of dried specimens, which proved most disappointing, I was led to begin the paintings by a desire to have some permanent record of what I saw. The list of 104 plants is far from being exhaustive, but contains perhaps the majority of the more prominent ones. I am not a botanist, but have endeavoured to delineate as faithfully as possible the form and structure of the various species, and have also tried to reproduce something of the intensity of colouring which seemed to me so remarkable. I may perhaps be allowed to make a special mention of the number of Flamboyant trees, *Poinciana regia*, which with their abundance of bright scarlet blossoms form so striking a feature of the landscape in the months of May, June, and July." A list of most of the botanical names, supplied by Mr. John Bovell, F.L.S., of the Agricultural Department, Barbados, was also shown. The exhibitor reminded those present that some of the colours, especially the mauves and blues, are not seen to advantage in artificial light.

The Rev. T. R. R. STEBBING read his paper, "Historic doubts about *Vaunthompsonia*." (Abstract, p. 78).

Dr. W. T. Calman, the General Secretary, and Prof. A. Dendy, Sec.L.S., joined in the subsequent discussion.

Dr. OTTO STAFF, Sec.L.S., by permission of the Director of the Royal Botanic Gardens, Kew, showed some living specimens of Cactoid Euphorbias from South Africa, and commented on the salient features of the group.

The President, Miss M. Carson, Mr. H. R. Darlington, the Treasurer, Mr. Clement Reid, Mr. J. C. Shenstone, Prof. A. Dendy, and Dr. C. E. Moss (visitor) contributed further remarks, and Dr. Staff replied.

March 21st, 1912.

Dr. D. H. SCOTT, M.A., F.R.S., President, in the Chair.

The Minutes of the General Meeting of the 7th March, 1912, were read and confirmed.

Dr. Ronald Hamlyn-Harris, F.Z.S., and Mr. Robert Heath Lock, M.A. (Cantab.), were proposed as Fellows, and Mr. William Hales as an Associate.

Mr. Richard Higgins Burne, and Prof. Augustus Daniel Imms, B.A., D.Sc., were elected Fellows.

A paper by Dr. IGNACIO BOLIVAR and Mr. CHARLES FERRIÈRE, B.Sc., on the "Orthoptera-Phasmidæ of the Seychelles," and communicated by Prof. J. STANLEY GARDINER, F.R.S., F.L.S., was read by the Zoological Secretary, who, in illustration of this paper, showed living examples of Phasmidæ and their eggs.

Mr. W. F. Kirby, Miss E. Pearse (who also showed specimens), Miss E. M. Wakefield, Dr. A. P. Young, and Dr. Otto Stapf, Sec.L.S., joined in the discussion which followed.

Miss MAY RATHBONE exhibited a specimen of *Trifolium repens* which showed phyllody of the carpels in a very distinct manner, the axes of many of the flowers being prolonged into a single leaflet, subtended by stipules, the rest of the flower calling for no remark. (Abstract, p. 79.)

Miss E. M. Berridge, the President, Dr. O. Stapf, Dr. C. E. Moss (visitor), Mr. H. R. Darlington, the Rev. E. S. Marshall, and Dr. R. R. Gates (visitor), contributed further observations.

Mr. J. A. LIDDELL's paper, "On *Nitocrameira bdelluræ*, a new genus of parasitic Canthocamptidæ," communicated by Prof. G. C. BOURNE, F.R.S., F.L.S., was read in abstract by the Zoological Secretary, and commented on by the Rev. T. R. R. Stebbing, Dr. W. T. Calman, Prof. Dendy, Sec.L.S., and the President.

The Botanical Secretary gave an account of a paper by Mr. W. WEST and Prof. G. S. WEST entitled "On the Periodicity of the Phytoplankton of some British Lakes."

Mr. H. N. DIXON showed a series of plants from South Portugal, stating that the plants shown were collected on a botanical visit to Algarve in company with Mr. W. E. Nicholson in May, 1911. The trip was mainly taken with a view to bryophytic study, and the phanerogams were only incidentally collected. They were not shown with special reference to their botanical interest, though some of them were decidedly rare, but chiefly in order to draw attention to the method of mounting in some instances, certain of the specimens being mounted on sheets of black paper, instead of the ordinary white. In some cases, as for instance with white and yellow flowers, or with many grasses, the colour of the flower is shown up much better by the contrast; and in others, where this is not conspicuously the case, the black background produces a restfulness to the eye which probably, quite apart from colour contrast, is an advantage. It is not suggested that in all cases, or for herbarium purposes, there is any advantage gained, but for exhibition purposes, and for a certain class of plants it seems an improvement over the ordinary white sheet. The surface should of course have as little glaze as possible, and a paper should be chosen which has been found to bear considerable exposure to light without discoloration.

Several of the plants shown are endemic to Portugal, and others to the Spanish Peninsula.

Dr. C. E. Moss, Mr. Wilfred Mark Webb, Mr. J. C. Shenstone, and the Treasurer also spoke on the subject of the exhibition.

Dr. JOHN MASTIN sent for exhibition under the microscope, two slides of Polycistina obtained under the following circumstances:—

“On the 4th September, 1911, a few days after a stormy sea and heavy wind, on the coast off Whitby, Yorkshire, I saw a little patch of beautiful iridescent colour floating on the surface of the then calm water. I skimmed this cloud of colour, and on clearing later, found it to be varieties of Polycistina, of the family Rhizopoda, but having siliceous instead of calcareous shells.

“These shells, which are of magnificent forms, are identical with those usually (and, I am informed, hitherto *only*) found in the West Indies and along the coasts of Florida and the Gulf of Mexico. I believe they are the first discovered on the English Coast, to which they will most probably have been brought by the Gulf Stream.

“I shall be glad if any of the Fellows of the Society can inform me if such as these have ever been discovered on the Yorkshire Coast, or indeed on any portion of the home coasts.

“Up to the present I have failed to find similar ones in any private or public collection which have been found locally. They are all purely West Indian varieties and appear to be absolutely new on these shores.”

Prof. Dendy remarked upon the interest of this exhibition, and that the forms shown were similar to those procurable from Barbados.

April 18th, 1912.

Dr. D. H. SCOTT, M.A., F.R.S., President, in the Chair.

The Minutes of the General Meeting of the 21st March, 1912, were read and confirmed.

Mr. Richard Higgins Burne was admitted a Fellow.

Mrs. Eleanor Mary Reid, B.Sc., was proposed as a Fellow.

Mr. Alleyne Leechman and Dr. Charles Edward Moss were elected Fellows.

The following Auditors for the Treasurer's Accounts were nominated by the Council, and elected by show of hands, namely: for the Council, Dr. A. B. Rendle and Mr. A. W. Hill: for the Fellows, Mr. Hamilton H. C. J. Druce and the Hon. N. C. Rothschild.

The President announced that the Linnean Medal would be awarded to Dr. R. C. L. PERKINS, famous for his researches on the Fauna of the Sandwich Islands.

Dr. D. H. SCOTT read a paper on "*Botrychioxylon paradoxum*, a Palæozoic Fern with Secondary Wood."

Remarks were contributed by Dr. E. A. N. Arber, Prof. A. C. Seward, and Dr. W. H. Lang, the author replying briefly.

Dr. E. A. NEWELL ARBER then summarized his paper, "*On Psymnophyllum majus*, sp. nov., from the Lower Carboniferous Rocks of Newfoundland, together with a Revision of the Genus, and Remarks on its Affinities."

Prof. Seward and the President followed with additional observations.

Mrs. HENSHAW then gave a lantern demonstration on "The Alpine Flora of the Canadian Rocky Mountains," the slides giving admirable representations of the more striking constituents of the flora, with views of the magnificent mountain scenery in which the plants are found.

Dr. O. Stapf, Sir Frank Crisp, and the President joined in the discussion which followed.

May 2nd, 1912.

Dr. D. H. SCOTT, M.A., F.R.S., President, in the Chair.

The Minutes of the General Meeting of the 18th April, 1912, were read and confirmed.

Mr. Charles Hedley and Mr. Thomas Alfred Dymes were admitted Fellows.

Mr. William Henry Daun, M.A. (Cantab.), the Rev. John Stewart Müller, M.A. (Cantab.), and Mr. Edwin Percy Phillips, M.A. (Cape Univ.), were proposed as Fellows.

The following persons were severally balloted for and elected:—Dr. Ronald Hamlyn-Harris, F.Z.S., and Mr. Robert Heath Lock, M.A. (Cantab.), Fellows; Dr. Hermann Christ-Soein, of Basel, Foreign Member; and Mr. William Hales, Associate.

The President read the proposed alterations in the Bye-Laws in Chap. II. Sections 2 and 3, with regard to Composition; the new provisions were explained by the President, and the method of voting to be adopted on the 6th June, by the General Secretary.

Miss T. L. PRANKERD, B.Sc., read her paper "On the Structure of the Palæozoic Seed *Lagenostoma ovoides*, Will.," and communicated by Prof. F. W. OLIVER, F.R.S., F.L.S.

The President, Prof. F. W. Oliver, and Dr. Marie Stopes contributed further remarks on the subject of the memoir.

A paper, by Dr. KAREL DOMIN, was communicated and read by Dr. OTTO STAPF, Sec.L.S., and entitled: "Additions to the Flora of Western and North-Western Australia."

Dr. Rendle and Dr. Stapf commented on certain points of the paper.

The next paper was by Mr. G. H. WAILES, entitled "Fresh-water Rhizopoda from the States of New York, New Jersey, and Georgia, with a supplementary account of some species from the Seychelles."

Mr. WILFRED MARK WEBB exhibited several specimens of the extremely rare British Woodlouse, *Lygidium hypnorum*, and explained the circumstances under which he obtained these specimens from Great Warley, Essex.

The Rev. T. R. R. Stebbing adverted to his first finding the species in Britain, and the relations experienced with the then leading authorities on the group; Prof. Dendy also joined in the discussion.

The Rev. R. ASHINGTON BULLEN had sent a box containing cochineal insects for exhibition; he expressed a fear that they would be dead before they could be shown, which was the case.

The General Secretary referred to the unfortunate experience of Carl von Linné, who had laboured so hard to procure living insects; when at last they reached Uppsala they were cleaned off by the gardener, without the Professor's knowledge, to his deep chagrin.

The General Secretary placed before the Meeting a summary of his recent investigation of the Linnean Herbarium. He stated that a full catalogue of its contents had long been desired, but difficulties have stood in the way of a complete catalogue. The present list was on a modest scale, and only aimed at indicating which of the Linnean types are represented in the Herbarium verified by himself, and these will be shown in the list by special type. This will probably obviate much correspondence, and many useless references in search of species not contained in the Herbarium. It is hoped that the "Index" may be printed by the autumn of the present year.

It was found in the course of investigation that Sir J. E. Smith had transferred no fewer than 110 species to genera other than those assigned to them by Linné; these have now been restored to their original positions. Three signs which had been a puzzle

to botanists since the days of the younger Linné, have been interpreted; and another discovery shows that Linné had catalogued his plants as late as 1767, making three enumerations. Another interesting find was that the insects and shells were marked off in copies of the 10th ed. of the 'Systema,' 1759, and the 12th ed. 1767. A short series of slides in illustration, closed the exhibition.

Dr. Rendle, Dr. Stapf, and the President referred to certain points, and the author replied.

May 24th, 1912.

Anniversary Meeting.

Dr. D. H. SCOTT, M.A., F.R.S., President, in the Chair.

The Minutes of the General Meeting of the 2nd May, 1912, were read and confirmed.

Miss Clara Ethelinda Larter and Sir Frederick William Moore were admitted Fellows.

Miss Ethel Mary Doidge, M.A. (Cape Univ.), Mr. Thomas Bainbrigge Fletcher, and Mr. John Gervaise Turnbull, were proposed as Fellows.

The Treasurer then laid his Annual Statement of Accounts before the Meeting, and explained the various items of receipts and expenditure, and the same was received and adopted upon the motion of the President (see pp. 22 & 23).

The General Secretary then laid his Annual Report before the Meeting, thus :—

Since the last Anniversary 10 Fellows had died, or their deaths been ascertained :—

Algernon Sidney Bicknell.	Albert Harrison.
Dr. Harry Bolus.	Thomas Morland Hocken, M.D.
Rev. John Bufton, Ph.D.	Sir Joseph Dalton Hooker, O.M.
Mrs. Marian Sarah Farquharson,	George Maw.
F.R.M.S. [Mrs. Ogilvie-	John Campbell Oman.
Farquharson of Haughton.]	Francis Tagart.

Also 2 Associates :—

Alfred Fryer.	Oswald Arthur Sayce.
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And 2 Foreign Members :—

Dr. Jean Baptiste Edouard Bornet.	Prof. Eduard Strasburger, F.M.R.S.
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Fellows withdrawn (14):—

Rev. William Jenkins Webb Anderson.	Prof. A. F. Stanley Kent.
Dr. Frederic Hungerford Bowman.	Robert Walter Campbell Shelford.
Hugh Broughton.	Thomas R. Sim.
Fergusson Escombe.	Matthew B. Slater.
Dr. George Wallace Eustace.	Herbert Stone.
Rev. Hilderic Friend.	David Thomas.
Robert Lawrence Heinig.	William Whitwell.

Fellows whose names were ordered by the Council to be removed from the List (2):—

Walter Harris Coffin. | James Moore Williams.

Fellows elected 42, of whom 36 have qualified up to the present time; also 2 Associates and 1 Foreign Member.

The Librarian's report was as follows:—

During the past year there have been received as Donations from private individuals 82 volumes and 228 pamphlets.

From the various Universities, Academies, and Scientific Societies there have been received in exchange, and otherwise, 321 volumes and 94 detached parts, besides 76 volumes and 21 parts obtained in exchange, and as donations from the editors and proprietors of independent periodicals.

The Council at the recommendation of the Library Committee have sanctioned the purchase of 193 volumes and 60 parts of important works.

The total additions to the Library are therefore 672 volumes and 403 separate parts.

The number of books bound during the year is as follows:—
In full-morocco 3, in half-morocco 225, in half-calf 3, in full-cloth 438, in vellum 58, in buckram 55, in boards and half-cloth 24. Relabelled (half-morocco and cloth back) 44. Total 850 volumes.

The President referred to the losses by death which the Society had sustained during the past year, and especially to the quite recent death of their Foreign Member, Prof. Strasburger, the news of which had only been received the day before. Prof. Strasburger received the Linnean Medal in 1905, and the Darwin-Wallace Medal in 1908; he was the founder and acknowledged leader of modern cytology on its botanical side; students from all parts of the world frequented his famous laboratory, and to many of his colleagues, like the speaker, he was a valued personal friend.

The President referred to the end, now so near, of his own term of office, and while regretting for his own sake that the

* time had come for him to be gathered to his predecessors, congratulated the Society on their gain in securing Prof. Poulton as their new President.

He expressed his great regret that Prof. Dendy was unable to offer himself for re-election as Zoological Secretary, his many and increasing duties preventing him from continuing his valuable services to the Society. In Prof. Dendy they were losing a vigorous and able officer, whom they could ill spare. If, however, they could not keep Prof. Dendy, they were fortunate in being able to put forward Prof. Bourne, of Oxford, as his successor.

The General Secretary having read the Bye-Laws governing the Elections, the President opened the business of the day, and the Fellows present proceeded to vote for the Council and Officers.

The Ballot for the Council having been closed, the President nominated the Rev. T. R. R. Stebbing, Dr. A. P. Young, and Mr. A. W. Oke, Scrutineers, who, having cast up the votes, reported to the President, who declared the result as follows :—

TEMPEST ANDERSON, D.Sc. ; Prof. G. C. BOURNE, F.R.S. ; Prof. ARTHUR DENDY, D.Sc., F.R.S. ; Prof. J. STANLEY GARDINER, F.R.S. ; Prof. PERCY GROOM, D.Sc. ; HENRY GROVES, Esq. ; Prof. W. A. HERDMAN, F.R.S. ; ARTHUR W. HILL, M.A. ; Dr. B. DAYDON JACKSON ; Prof. F. KEEBLE, Sc.D. ; HORACE W. MONCKTON, F.G.S. ; Prof. FRANCIS W. OLIVER, F.R.S. ; Prof. E. B. POULTON, F.R.S. ; Dr. WALTER GEORGE RIDWOOD ; HENRY N. RIDLEY, C.M.G., F.R.S. ; Miss EDITH R. SAUNDERS ; Dr. DUKINFIELD H. SCOTT, F.R.S. ; Dr. OTTO STAFF, F.R.S. ; Miss ETHEL N. THOMAS, B.Sc. ; Dr. A. SMITH WOODWARD, F.R.S.

(The retiring Councillors were :—Prof. V. H. BLACKMAN, Mr. HENRY BURY, Sir FRANK CRISP, Mr. E. S. GOODRICH, F.R.S., and Dr. A. B. RENDLE.)

The Ballot for the Officers having been closed, the President appointed the same Scrutineers, who, having cast up the votes, reported to the President, who declared the result as follows :—

President : Prof. E. B. POULTON, F.R.S.

Treasurer : HORACE W. MONCKTON, F.G.S.

Secretaries : Dr. B. DAYDON JACKSON,
Dr. OTTO STAFF, F.R.S.,
Prof. G. C. BOURNE, F.R.S.

Dr. D. H. SCOTT, the retiring President, then delivered his Address :—

PRESIDENTIAL ADDRESS.

IN my Address last year I ventured to give you a short sketch of the work of some of the founders of scientific palæobotany. The subject which I propose to touch on today, though not dissimilar, has claims on our attention of a more personal nature. The death, during the past year, of the acknowledged leader of Botany, Sir Joseph Hooker, our most distinguished Fellow, is an event which must be present to the minds of all of us. The notice of his career for our Proceedings is in hands more competent than mine; I shall limit myself to one special field of his activity, that on which alone I feel in a position to speak, and propose to offer you a few remarks on Hooker's relation to the study of fossil plants.

Hooker's work on fossil botany began very early in his career, and was, with one exception, limited to his younger days, though he kept up his interest in the subject all through.

His first palæobotanical paper, dated 1842, is on fossil wood from the Macquarie Plains in Tasmania, a locality which he visited in the course of his famous Antarctic voyage. The fossil tree (now in the Natural History Museum) was found imbedded in Tertiary basalt; it is curious to find that in his investigation Hooker made no attempt to have sections cut. In the outer layers no siliceous matter had infiltrated into the intervening spaces between the elements, so that they could be separated for microscopic examination, and the "glandular tissue, the distinctive character of a pine-wood," be recognised. More than 60 years later the stem was more fully investigated by Dr. Arber, and named *Cupressinoxylon Hookeri*. On reading this paper Hooker wrote to me (March 28, 1903):—"I was much amused the other day on finding my infant attempt upon a fossil plant christened in the Geological Journal as a new species of plants!"

A Note on a fossil plant from the Fish River, South Africa, was another early contribution (1846). No name was assigned to the specimen, probably Rhætic, and no definite opinion on its affinities was expressed. It has since been referred to the Equisetaceous genus *Schizoneura*.

These were unimportant works; but in 1846 Hooker was appointed Botanist to the Geological Survey of Great Britain, and though he only held the post for little more than a year, three valuable memoirs, published in 1848, were the immediate result. In fact, this was the time of his most active work on fossil plants. The first of these memoirs is of a general character; it is "On the Vegetation of the Carboniferous Period as compared with that of the present day," and is of remarkable interest as giving the impression made on the mind of a brilliant young botanist by the then state of our knowledge of Palæozoic plants. He says that his observations "are little more than the first impressions

received by a naturalist, who, having been almost exclusively occupied with an existing Flora, is called upon to contrast with it the fragmentary remains of another Flora, whose species are, without an exception, different from those now living, which represent in part the vegetation of a period indefinitely antecedent to the present, and have been succeeded by still other plants, equally diverse from both, and which have likewise perished" (p. 387). He realised the true interest of the enquiry, saying:—"As a field for botanical research there is none so novel as the coal formation, the few yards of shaft being more than equivalent to the longest voyage, in respect of the amount and kind of difference between the vegetation the naturalist is acquainted with and that he seeks to understand" (p. 394). At the same time Hooker, in this as in all his palæobotanical work, was deeply impressed with the excessive difficulties of the subject, and it must be admitted that his criticisms, judicious as they always were, are apt to sound somewhat depreciatory and discouraging. In the later years of his life, as we shall see, he felt able, under the influence of recent advances, to take a more hopeful view of the position.

In the Essay of 1848 Hooker expressed the opinion that the classification of plants is less easily intelligible than that of animals, being less concerned with external characters. "It is partly," he says, "owing to these circumstances that the study has been comparatively neglected; partly also because a far more comprehensive knowledge of the existing forms of plants is required to make any progress in fossil botany, than of recent zoology to advance equally in palæontology" (p. 388). This is a very just comment, and accounts in a great degree for the rather late development of plant-palæontology.

While he recognised that the Carboniferous period presents exceptional facilities for investigation, Hooker scarcely did justice to the quality of its fossils. "Plants, whose tissues are so lax as to be convertible after death into a mass of such uniform structure as coal, evidently would not retain their characters well during fossilization, under whatever favourable circumstances that operation may be conducted. We consequently find that few specimens are available for scientific purposes" (p. 389). This somewhat theoretical difficulty would not trouble one at the present day.

It is interesting to find that Hooker already admitted the necessity for anatomical work. He says that the investigator's knowledge should embrace "a familiarity with vegetable anatomy, for when the stem or trunk alone is preserved, which is often the case, a minute examination of its tissues is the only method of determining its position in the natural series" (p. 392). All the same, Hooker was distrustful of anatomical characters, for in discussing the affinities of *Sigillaria elegans* he says:—"It is not by solitary characters, and least of all by such as the arrangement of the tissues in the axis affords, that genera of plants are referred to their natural orders" (p. 422). In this he was more cautious

than Brongniart and escaped his errors, but the riper knowledge of later times has fully rehabilitated the anatomical method.

He gives an excellent account of the Coal-measures and the distribution of their fossil plants; he says it may be concluded that the Coniferæ [now Cordaiteæ] "never were associated with the *Sigillariæ* and other plants which abound in the coal seams; but that they flourished in the neighbourhood, and were at times transported to these localities" (p. 396), a conclusion confirmed by later work. He also calls attention to "the extraordinary size of both the vascular and cellular tissue of many" coal-plants, a point which has often struck subsequent observers, though it does not extend to the Cordaiteæ, plants which had a different habitat.

He admits that this singularly succulent texture of the typical Coal flora possibly indicates a great degree of humidity, but in a later paper* he shows that no reliance can be placed on this argument, succulence being specially characteristic of the plants of deserts; at the same time he considered the geological evidence for the swamp-flora theory of the Coal-measures conclusive.

He was inclined to regard the Carboniferous Flora as poor in species, saying "A luxuriant vegetation is no index to a varied one; and as many of our modern woods and even great areas of tropical forests consist of but a few species multiplied *ad infinitum*, so may the forests of the Carboniferous period have been composed of but a few *Sigillariæ* and *Lepidodendrons*, sheltering an undergrowth of a limited number of kinds of ferns, for a very limited number of them (comparatively speaking) if as protean as some of their allies are in our day, would embrace all the known species of the Fossil Flora" (p. 398). He proceeds to show that a recent Flora, marked by a preponderance of ferns, is almost universally deficient in species of other orders. These speculations are interesting, and show how different the point of view was then from that of the present day. The flora of a past age was then treated rather as a peculiar flora of our own time might be—the evolutionary idea had not taken root. Whether the Flora of the Coal was a poor or a rich one is hard to decide, for we are still very ignorant of the true limits of species, a point on which Hooker's warnings are as much needed as ever.

Hooker refused to admit that the vegetation of the Carboniferous period was less highly developed than what succeeded it. His remarks here are very just. "We know," he says, "too little of the structure of the ferns of that day to pronounce them either more or less complete than their allies of the present time; while of the Lycopodiaceæ it may be safely asserted, that they were of a form and stature far more noble, and in structure more complicated than any plants of that order now existing" (p. 400). His caution about the ferns is seen to be more than justified, now that we have reason to believe that so many of them at that period were in reality seed-bearing plants. At that time, of course,

* *Volkmannia*, 1854.

and for many decades afterwards, there was no suspicion of the kind. Hooker, in fact, speaks of the ferns as the only group with obvious or recognisable affinities with an existing order. He even regarded *Pecopteris* as "the fossil representative, if not congener, of the modern *Pteris*" (p. 401); adding that it is not improbable that there are other genera of living ferns fossilized in the shales of the coal-formation. He illustrates the heteromorphous frond of his *Pecopteris heterophylla* (now *Alethopteris decurrens*) by that of the New Zealand *Pteris esculenta* (figs. 1 & 2), an analogy none the less striking because the plants have proved to be really so wide apart. It is interesting, however, to note that he already recognised the affinity of Corda's *Senftenbergia*, of which the fructification was known, with a recent group of ferns (*Aneimidietyon*, our *Aneimia*), a view now generally admitted.

Discussing the bearing of the supposed predominance of ferns on the question of climate he writes: "A climate warmer than ours now is would probably be indicated by the presence of an increased number of flowering plants, which would doubtless have been fossilized with the ferns; whilst a lower temperature, equal to the mean of the seasons now prevailing, would assimilate our climate to that of such cooler countries as are characterized by a disproportionate amount of ferns" (p. 404). Thus he appears to explain the absence of flowering plants from the Coal-flora by the climatic conditions.

Hooker, at that time, was quite alive to the remarkable rarity of fructifications on the fossil ferns of the Coal, and cites a striking analogy in explanation. "The infrequency of fructification upon the fronds of the fossil ferns belonging to this formation appears as possibly another argument in favour of many of those appertaining to tree-ferns; for, while the herbaceous and caulescent ferns of New Zealand are scarcely ever barren, the arborescent species are almost invariably so. I think I am safe in saying that of two or three kinds of New Zealand tree-fern, not one specimen in a thousand bears a single fertile frond, though all abound in barren ones" (p. 405). This observation must still have considerable weight when we are tempted to rely on *negative* evidence in judging of the nature of Carboniferous fern-like plants.

Hooker gives some striking examples of the worthlessness of external vegetative characters in ferns, showing how one and the same frond might, in the sterile condition, be equally well referred to four different genera (p. 408). Attention is also called to the dimorphism, in many cases, of the fertile and sterile fronds, a point of much importance, as it has proved, in dealing with the so-called ferns of the Carboniferous.

Venation, a character much relied on by pteridologists from Brongniart onwards, is shown to be usually characteristic of minor divisions, though not always valid even for them, while useless for the discrimination of main groups. Hence genera founded on venation must be wholly artificial. Although no palæobotanist

would dispute this, the warning was not superfluous, for names exercise an undue influence and we are still apt to think that something is attained when we have referred a fossil to *Pecopteris* or *Neuropteris*. Outline is, of course, more deceptive even than venation. "On the whole," he remarks, "it is probable that the irregularity of outline and division, prevalent in recent ferns, is the most fertile source of error in our investigations amongst the fossil" (p. 413).

Considering the part played by glands in some recent investigations, it is worth noticing that Hooker specially calls attention to the value of the characters afforded by hairs, scales, and glands in living ferns (p. 414). Hooker's critical observations on the study of fossil ferns have by no means diminished, but rather gained in weight, now we know that under the name "ferns" so many Carboniferous plants of widely different affinity have been included.

Passing on to *Sigillaria*, Hooker gives an interesting account of the occurrence of the stems in coal-mines, showing a considerable practical knowledge of the subject. He discusses the possibility that some of the *Lepidodendrons* may have been the branches of *Sigillaria*, and adds that there is no real distinction between the two genera (p. 416). At that time all kinds of ideas as to the affinities of *Sigillaria* were held by good authorities. Hooker thought it worth while to discuss, though of course only to reject, the reference of this group to Euphorbiaceæ, Cacti, and Palmæ (p. 420). The opinion that they were ferns had the most advocates, though already abandoned, on good grounds, by Lindley and Hutton. Hooker is rather favourable to the idea of some affinity, or at least analogy, between *Sigillaria* and ferns, and even argues for the probability that the *Sigillarias* may have borne fern-fronds (p. 417). He would not admit that anything positive was known at that time of the foliage of *Sigillaria*, for he was inclined to refer the only species in which the true leaves had then been observed (*S. lepidodendri-folia*) to *Lepidodendron*. Apart from his too liberal concessions to the fern-theory, Hooker shows sound judgment as regards *Sigillarian* affinities, for he says: "That the *Sigillariæ* were allied to Lycopodiaceæ is evident, their tissues and scarring being very like those of *Lepidodendron*" (p. 421).

He recognised the high value of Brongniart's admirable account of the anatomy of his *Sigillaria elegans* (really *S. Menardi*), but had doubts whether the plant was a true *Sigillaria*. It will be remembered that Brongniart was led by his discovery of radially seriated (secondary) wood in *Sigillaria* to refer that family to the "great division of Gymnospermous Dicotyledons." He still recognised some affinity to the Lycopodiaceæ, regarding the *Sigillarias* as coming between Lycopodiaceæ and Cycadeæ, but nearer to the latter. Hooker's remarks on this point are most judicious. "Assuming," he says, "the *S. elegans* to be a true

Sigillaria, it appears to afford slender grounds for the adoption of the above view, as regards its uniting such diverse and distinct orders as Cycadeæ and Lycopodiaceæ. It is true that it departs signally from the ordinary structure of the latter order; but it requires stronger evidence than the more perfect structure and regular arrangement of the bundles of vascular tissue to ally it to Cycadeæ, with which, in general appearance, habit, fluting, markings, stigmaroid roots, absence of accompanying foliage, and many other points, it has nothing in common" (p. 421). Thus in the controversy which for so long divided fossil botanists, Hooker at once placed himself on the side which the event has shown to have been the right one.

Hooker's account of *Lepidodendron* contains a much needed caution on the question of species. "If the species of that genus," he remarks, "were as prone to vary in the foliage as are those of *Lycopodium*, our available means for distinguishing them are wholly insufficient" (p. 423). He illustrates his point by the New Zealand species, *Lycopodium densum*. The suggestion that some of the *Trigonocarpi* were the seed-vessels (sporangia) of *Lepidodendron* is curious, considering that other fossil "seeds" have turned out to be really of that nature.

At that time Hooker had seen no Calamitæ with structure, and he refrains from expressing any opinion as to their relationships. It is interesting to find that he looked, though in vain "for evidence of their being Equisetaceæ, in the presence of those siliceous stomata with which that order abounds, and which would surely have been preserved in the fossil state" (p. 427). It is only within the last year or two that this evidence has been actually found, in the stomata of Calamitean leaves investigated by Mr. Hamshaw Thomas.

In his concluding remarks, Hooker speaks of the abundance of specimens, suggestive of most interesting points, still to be worked out. He hoped that they would form the materials for a succession of essays in the Memoirs of the Geological Survey, but only two more were ever published, his Himalayan expedition intervening.

The first of these is his memoir "On some Peculiarities in the Structure of *Stigmaria*." The merit of this paper consists in the excellent and well-illustrated account given of the internal structure of *Stigmaria*, which was already known to be the root, or at least the underground portion of *Sigillaria*. Only in one point was Hooker seriously mistaken regarding the anatomy. He allowed himself to be misled by an observation of Goeppert's, and believed that the vascular strands passing out through the medullary rays originated from isolated bundles occurring in the pith. As Williamson showed, nearly 40 years later, no such medullary bundles exist; Goeppert was deceived by Stigmarian rootlets burrowing in the decayed pith, and took them for integral parts of the structure.

The comparison drawn between the structure of *Stigmaria*

and that of *Sigillaria* itself, and of *Lepidodendron* (p. 436) is interesting; but the state of anatomical knowledge was not then sufficiently advanced for the true homologies of the parts to be recognised. Regarding the affinities, Hooker says: "The points by which *Sigillaria* (and *Stigmaria*) is allied to Lycopodiaceæ, especially through the *Lepidodendra*, are probably quite sufficient" (p. 437). He again rejects the idea of any affinity with Cycadeæ, admitting only a certain analogy, a view in which he was undoubtedly justified.

The most important of Hooker's palæobotanical works is certainly the third paper in the Memoirs of the Geological Survey—"Remarks on the Structure and Affinities of some *Lepidostrobi*," in which, for the first time, he explained the true structure, hitherto quite misunderstood, of the fructification of the Carboniferous Clubmosses.

All his specimens of *Lepidostrobus* were found in nodules of clay-ironstone, from the coal-fields of Staffordshire, Glamorgan, &c. Curiously enough the best specimens occurred, as broken frustules of cones, inside the stems of *Lepidodendron elegans* and other species, having been washed into the hollow stumps before fossilization—the way in which this is likely to have occurred is discussed in detail. He examined no less than 30 such trunks from Staffordshire, all containing cones, which were sometimes very numerous.

Hooker begins his description by pointing out that three conditions must be fulfilled in order to determine the relationships of fossil cones. It is necessary to know: (1) the arrangement of the individual organs and nature of the scales; (2) the anatomical structure of the axis and other parts; (3) the nature of the contents—"there may be stamens or male organs,—ovaria or female ones;—or lastly, capsules containing reproductive spores (which are peculiar to plants having no sexual system)" (p. 441). At that time, immediately before the appearance of Hofmeister's great works, knowledge of the sexual reproduction of the Higher Cryptogams was still very imperfect. In *Lycopodium*, indeed, the genus which Hooker probably had especially in mind, nothing whatever was known of the sexual process till nearly 40 years later.

The memoir is illustrated by eight plates, which give an admirable idea of the external characters and internal structure of the cones. The slightly restored figure of the scales and sporangia in radial section (plate 8. fig. 11) has become classical, and is remarkably true to nature. The only defect is that the attachment of the sporangium to its scale is shown too short, no doubt owing to the section examined not having been so strictly radial as is necessary to show the narrow attachment in its full length.

He described the spores as "consisting of three or rarely four sporules, which are afterwards separated from one another" (p. 451), but it is probable that what he really observed, in most cases, was the split membrane of a single spore, and not the true tetrads (except perhaps in the case shown in plate 6. fig. 11). The mistake is extremely easy to make, as I know from experience.

Apart from these somewhat minute criticisms, it may be said without any reserve that Hooker's work at once placed our knowledge of these cones on a perfectly satisfactory basis, leaving indeed little, except the discovery of the megaspores, to be added by later observers.

He had no hesitation in referring the cones to *Lepidodendron*, on the ground of association, and of the entire agreement between the axis of the cone and the stem in the arrangement of the tissues. He considered that the only material difference from the recent *Lycopodium* was in the form of the sporangium. He emphasizes the clear Lycopodiaceous affinity and finally rejects the vague suggestions of Cycadean or Coniferous relationship which were still in the air.

At the conclusion of the memoir, he gives some examples from recent plants of false cones, often pathological, as a warning to the student of fossils. Although his own *Lepidostrobus* were so perfectly cleared up by his researches, he appears to have had some doubts about other species, and was thus led to a characteristic manifestation of scepticism.

The *Lepidostrobus* memoir shows how much fossil Botany might have expected from Hooker, if he had continued to give his attention to the subject. This, however, was not in any high degree, the case; his subsequent activity was turned in other directions, and his later palæobotanical papers are, with one exception, of less positive importance, though often interesting as critical contributions.

Passing over a brief note on some doubtful Calamites, of Old Red Sandstone Age, from the Shetland Islands (1852), Hooker's next serious contribution to our knowledge of Palæozoic Vasculares was a memoir "On a new Species of *Volkmannia*" (1854). Sternberg's genus *Volkmannia* was long employed for various fructifications which have turned out to be of Calamitean or Sphenophyllaceous affinity. Hooker's species, *V. Morrisii*, from the Lower Carboniferous of Carlisle near Glasgow, is a fine cone, nearly 3 inches long and more than an inch broad, the stalk having a length of 9 inches. Hooker says "the general resemblance to a gigantic *Equisetum* without sheaths is obvious," but adds "It is perhaps not improbable that the genus may prove to be allied to *Lepidodendron*." Casuarineæ and Gnetaceæ are also referred to. The first suggestion is no doubt nearest the truth. As my friend Dr. Arber suggested to me, the size and character of the cone invite a comparison with *Cheirostrobis*, a fructification allied to the Sphenophyllaceæ and so far only known from structural specimens. Hooker felt the need for structural evidence in the case of his cone, saying "No progress in systematic Botany can be made without an extensive study of the structure and morphology of plants—of their comparative anatomy in fact, and the materials for these researches are seldom preserved in fossil specimens."

The memoir with Binney, "On the Structure of certain Limestone Nodules enclosed in seams of Bituminous Coal, with a Description

of some *Trigonocarpons* contained in them" (1855), is a valuable contribution, from two points of view. An excellent account of the nature and occurrence of the calcareous nodules (coal-balls) is given, the earliest, I believe, extant, but this was presumably the work of Binney. The writers notice the absence of fern-fronds from their petrified material, saying: "It is difficult to conceive the delicate fronds of Ferns so preserved that their structure should be recognized on a transverse section of them in the fossil state." Of course the structure of the leaves of some of the *Pteridosperms* (then included under Ferns) is now well known, but the rarity of true fern-fronds in the petrified condition is remarkable, considering the frequency of their petioles and stems.

As regards the *Trigonocarpons*, the writers proved that the common nut-like specimens are merely casts of the seed-cavity. They give, from their structural specimens, an excellent description of the "outer and second integument" (our sarcotesta or outer fleshy layer, and sclerotesta); the nucellus with its vascular bundles is also described, but not the outer system of bundles in the sarcotesta.

They made a detailed comparison with the seed of *Salisburia* (*Ginkgo*), and believed the affinities of *Trigonocarpon* to be Coniferous rather than Cycadaceous. As a matter of fact, Brongniart's suggestion of Cycadaceous relationship now seems nearer the truth. The authors say that association gives no clue—they were not then acquainted with the *Alethopteris*-leaves which so generally accompany these seeds.

They had some suspicion that *Trigonocarpon* might belong to *Sigillaria*, a suggestion which perhaps shows that Brongniart's belief in the Gymnospermous nature of *Sigillaria* was beginning to have an undue influence. The paper is an important one, as it placed our knowledge of one Palæozoic seed, at least, on a scientific basis.

Two papers by Hooker relate to the problematic organism *Pachytheca*, of Silurian age. The earlier work is "On the Spheroidal Bodies, resembling Seeds, from the Ludlow Bone Bed" (1852). The outer zone of the spheroidal thallus consists of radiating cells, and in this first paper Hooker said: "This simple structure of spore-sac is very characteristic of the natural order Lycopodiaceæ." He was thinking, no doubt, of the well-known columnar layer which forms the outer wall of the sporangium in *Lepidostrobus*. On a re-examination of specimens in 1875, he gave up this tentative hypothesis and recognised the Algal nature of the organism. His latest contribution to fossil Botany is a short paper on *Pachytheca*, published 37 years later in the 'Annals of Botany' for 1889, illustrated by beautiful drawings from his own hand, showing the detailed structure. He points out the remarkable density and power of resistance to deformation that the thallus must have possessed, and discusses the question whether the internal filaments might be parasitic. He cites the opinions of other botanists, but

does not express any decisive view of his own, beyond his conviction of Algal affinities.

This paper was preliminary to a somewhat fuller investigation by Mr. C. A. Barber, but the nature of the organism has never been any further determined.

Turning to Tertiary plants, a "Note on the Fossil Plants from Reading" derived from the Thanet Sands, is most interesting from the emphasis with which the author insists on the worthlessness of conclusions as to affinity drawn from mere impressions of leaves. Though his specimens were good ones, he refused to give even generic names to the plants. He found that all except two were decidedly Dicotyledonous and Exogenous. The other two "from having parallel veins, may be assumed to be Monocotyledonous," but beyond this he would not go.

Of other specimens he says: "It would be very easy to produce from an herbarium leaves so similar . . . as to deceive the inexperienced into instituting crude affinities." Speaking of the specimens generally Hooker remarks: "Though the leaves preserved in the Reading beds are all of the very commonest forms in the vegetable kingdom (of Dicotyledonous plants) I do not find that they exactly resemble those of any living English species and indeed, even were the resemblance so close that I could not distinguish them from existing forms, I should not consider myself warranted in drawing any conclusions therefrom." The only inference he permits himself is that there is no objection from the evidence of the plants to the climate having been a temperate one.

It would be well for our science if the caution shown in this paper by so great a systematist were more often emulated by those who approach the determination of plant-impressions with a more limited equipment of taxonomic knowledge.

In 1855 Hooker described two "seed-vessels," one ("*Carpolithes ovulum*, Brongn.") from the Eocene Beds of Lewisham, the other ("*Folliculites minutulus*, Bronn") from the Bovey Tracey Coal. Though very cautious in avoiding any definite determination of these objects, he was inclined to suggest, in each case, an affinity with Ferns, spore-like bodies having been found in the *Carpolithes*. I am informed by Mr. Clement Reid that the *Carpolithes ovulum* is the seed of a Water-lily, while the *Folliculites* is also a seed and certainly belongs to *Stratiotes*. The study of Tertiary seeds, now carried to such perfection by the work of Mr. & Mrs. Reid, was of course in its earliest infancy at the time when Hooker wrote these papers.

We have now run rapidly through those memoirs of Hooker's which are specially devoted to the consideration of fossil plants. It remains to notice a few references to the subject scattered through his more general Addresses.

I well remember the keen interest with which, as a boy, I read

Hooker's Presidential Address to the British Association at the Norwich Meeting of 1868. What appealed to one was, of course, his zealous championship of Darwinism, then by no means universally accepted, at least by the laity of Science. I will only, however, allow myself one quotation from this part of the Address. Speaking of the then position of the Darwinian theory the President said:—"it is *par excellence* an avowed favourite with the rising schools of naturalists; perhaps, indeed, too much so, for the young are apt to accept such theories as articles of faith, and the creed of the student is but too likely to become the shibboleth of the future professor" (p. 22). Darwinism has passed through and left behind the dangers of the age of faith predicted by Hooker; it has long emerged into the more wholesome air of free criticism, and has to face, on certain sides, the vigorous rivalry of alternative theories.

At that time it appears that fossil plants were attracting much attention, for Hooker says: "In my own special Science, the greatest advances that have been made during the last ten years have been in the departments of Fossil Botany, and Vegetable Physiology."

"In the past history of the globe, two epochs stand prominently forward—the Carboniferous and the Miocene—for the abundant materials they afford, and the light they consequently throw on the early conditions of the Vegetable Kingdom." (p. 13.) As regards the Carboniferous flora, he refers especially to the results attained by Binney and Carruthers. "These show," he says, "that *Calamites* is an actual member of the existing family of *Equisetaceæ*, which contained previously but one genus, that of the common Mare's-tail of our river-banks and woods." In this frank acceptance of the conclusion of the English palæobotanists Hooker was in advance of his time, for many years had to elapse before prejudices were overcome and difficulties surmounted so as to enable the true position of the *Calamariæ* to be universally recognised.

As regards the Miocene plants Hooker was much impressed by Heer's results; the evidence for a highly developed Arctic Tertiary Flora was what chiefly interested him.

In this Address Hooker, after some vigorous criticism of overreliance on evidence from leaves in palæobotany, added: "In this most unreliable of Sciences—Fossil Botany—we do but grope in the dark; of the thousands of objects we stumble against, we here and there recognise a likeness to what we have elsewhere known and rely on external similitude for a helping hand to its affinities; of the great majority of specimens we know nothing for certain, and of no small proportion we are utterly ignorant. If, however, much is uncertain, all is not so, and the Science has of late made sure and steady progress, and developed really grand results" (p. 15). These words express concisely his attitude towards the whole subject—severest criticism combined with a keen interest in such advances as seemed to him to rest on a sound basis. The same

feeling is expressed in his Address to the Royal Society in 1877. After referring to Lesquereux's work on Cretaceous and other fossil plants of the United States, he says: "In the whole range of the natural sciences no study is so difficult and at the same time so fruitless, if we regard the amount of results accepted by botanists, as compared with the prodigious labour their acquisition by palæontologists has demanded." This discouraging remark refers, however, essentially to work based on external characters, especially on those of fossil leaves—his *bête noir*. In the same Address he follows with interest the progress of American fossil botany as bearing on distribution, and points out that in North America there is no break between the Upper Cretaceous and Lower Tertiary floras. He returns to the subject in his Royal Society Address of the next year, 1878, in which he discusses with sympathy Saprota's theory of the Polar origin of vegetation.

In an Address to the Geographical Section of the British Association in 1881, Hooker again refers to the discovery in Arctic latitudes of fossil plants whose existing representatives are to be found only in warm temperate regions, and discusses the bearing of them on the history of the Flora of North America. This subject was one which specially appealed to him from its immediate bearing on the great questions of Geographical Distribution to which his best work was devoted.

During his later years Hooker followed the rapid progress of fossil botany with a most sympathetic interest, which was very kindly shown in some of his letters to me. In a letter of Oct. 3, 1896, acknowledging a copy of my Address to the Botanical Section at Liverpool, he said: "Your Fossil Botany pages, of course, interest me most and very much indeed." This, and other passages show that, with all his severity of judgment, he had a specially friendly feeling for the study of fossil plants. Perhaps his most interesting letter in this connection was one written on receiving the preliminary communication by Prof. F. W. Oliver and myself on the seed of *Lyginodendron*, which, it may be remembered, was identified in the first instance by the glands on the cupule. He wrote (June 13, 1903): "I must write to thank you for sending me the Proceedings R. S. with your and Oliver's paper on *Lyginodendron*, which has interested me more than I can express. What can be the meaning of the capitate glands? they would seem to indicate the cotemporaneous insect-life which I think has been demonstrated to exist in the Coal Measures. Has any one accounted for the quantity of pollen-grains in the sac of the ovule of Cycadææ? so many more than the wind is likely to have brought."

As regards the last suggestion some light is thrown on the difficulty by Prof. Pearson's observations on the insect-visitors of some South African Cycads. As regards the fossils the abundance of pollen in the ovule is equally remarkable, and Hooker's remark may here also give us a clue to the right explanation.

In a later letter (Oct. 6, 1906) he spoke of our "knowledge of

Botany, as it advances by strides under a study of its fossil representatives."

It is pleasant to a student of fossil plants to remember with what warm and generous sympathy the great leader of botanical science followed the recent progress of the subject.

Hooker's definite contributions to our knowledge of palæobotany were valuable, though limited in extent, owing to the small part of his time that he was free to devote to such investigations. His influence as a severe but just and friendly critic was of the greatest importance, and his warnings against the many pitfalls of the subject, though they may have discouraged some, are in reality entirely wholesome, and are no less needed today than at the time they were given.

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1848. On the Vegetation of the Carboniferous Period, as compared with that of the present day. *Mem. Geol. Survey*, vol. ii. 1848, p. 387.
1848. On some Peculiarities in the Structure of *Stigmaria*. *Ibid.* p. 431.
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Upon the conclusion of the Presidential Address the Rev. T. R. R. STEBBING moved:—

“That the President be thanked for his excellent Address, and that he be requested to allow it to be printed and circulated amongst the Fellows,” which, being seconded by Mr. CLEMENT REID, was carried by acclamation.

In acknowledging the vote of thanks proposed by Mr. Stebbing and seconded by Mr. C. Reid, the President said that, flourishing and active as the Linnean Society now was, he looked forward to even greater developments during the time of his successor and in the more distant future. The Fellows of the Linnean Society had perhaps even yet hardly realized their position as the first Biological Society of the World. That was a proud and responsible place for a Society to hold, and one which it required an effort to rise to. He should like to see the Society's rooms the recognized meeting place of British Biologists, and their Meetings the occasions when all the new biological discoveries were brought forward, whether destined for publication there or elsewhere.

The President then addressed Capt. CHARLES FRANCIS ULLATHORNE MEEK, F.L.S., and handed to him the bronze medal of the Crisp Award for Microscopical Science, and a cheque for the balance of the fund, this being the first presentation from the fund founded in 1910 by a donation from Sir Frank Crisp, speaking as follows:—

CAPTAIN MEEK,

It is now my welcome duty to present to you the Crisp Award for Microscopical Research, of which you are the first recipient.

The Award was founded two years ago by the generosity of our distinguished and valued Fellow, Sir Frank Crisp, to whose long-continued services in many directions our Society owes so much. I may briefly recall the conditions of the Crisp Award.

It is to be made at intervals of not less than five years, and is to be given by the Council for the best paper dealing with Microscopical Research. The Award is to be confined to Fellows and to work published by the Linnean Society since the previous Award, and, in the first case, during the five years previous. The first Award was to be given in May 1912, the date which we have now reached.

The paper on which the Award is made is your work on "The Spermatogenesis of *Stenobothrus viridulus*; with Special Reference to the Heterotropic Chromosome as a Sex Determinant in Grasshoppers," published in our Journal (Zoology) in 1911.

I am particularly glad that the choice of the Council has fallen upon this investigation of yours, because your work is, on the one hand, in the field of cytological microscopy, demanding the utmost skill in the use of advanced methods and the highest powers of the microscope; while on the other it is concerned with a fundamental problem of Biology of equal interest to the zoological and botanical sides of our Society. On both these grounds we feel that we are setting a fittingly high standard for future awards, worthy of the intentions of the founder.

The special interest of your work lies in its bearing on the question of the determination of sex, the insect you have investigated being one of those in which the male has an odd number of chromosomes in its somatic nuclei, while in the female the number is even, the figures in this particular case being 17 and 18 respectively. You have fully investigated the history of the spermatogenic divisions, with special reference to the behaviour of the accessory or heterotropic chromosome present in half the spermatozoa, while lacking in the remainder. The result of fertilization by the former is to produce females, by the latter to produce males, the odd chromosome consequently being regarded by some as the determinant of sex in these cases. You point out, with scientific caution, that this conclusion is not yet absolutely established, but the exact history of the process which you are able to give affords the best basis for the ultimate comprehension of its significance. Your singularly accurate and beautiful work deserves the more credit as it was begun at a time when you were still under the pressure of very different duties.

I have great pleasure in handing you the Crisp Award, in recognition of work which is of the best type of modern microscopical research.

Capt. Meek having received the medal and cheque, briefly returned thanks, and expressed his gratification at being chosen the first recipient of the award.

The President then addressing Prof. E. B. POULTON, handed to him the Linnean Medal for transmission to Dr. ROBERT CYRIL LAYTON PERKINS, who was abroad, said:—

PROFESSOR POULTON,

In the unavoidable absence of Dr. R. C. L. PERKINS, who is abroad, I ask you to receive our Medal on his behalf.

Dr. Perkins combines, in a rare degree, the qualities of an indefatigable field-naturalist and those of a skilled and precise

systematic investigator. He has himself worked out the systematics of the chief groups of the Hymenoptera, the whole of the Orthoptera and Neuroptera and part of the Coleoptera, and, among Vertebrates, the Birds of the Sandwich Islands. All these contributions are included in that great work the '*Fauna Hawaiiensis*,' written by numerous eminent specialists: his General Introduction to the Fauna is now in the Press.

Throughout Dr. Perkins's long residence in the Sandwich Islands, extending over a period of at least twenty-five years, he has studied the conditions of life of all the groups of animals in the Islands, and not only those on which he has himself written.

The value of his long and arduous researches is enhanced by the unfortunate circumstance that large numbers of species which he has studied are now extinct, owing to the importation and spread of competing Continental species and to the destruction of the native forests to make way for the sugar-plantations. Dr. Perkins's careful work will thus be the sole record in the future of the many deeply interesting forms of life which have already gone, and of many more which are on the point of disappearing.

To Dr. Perkins's more strictly scientific achievements must be added his remarkable success in founding the Experimental Station at Honolulu. I am told that he, more than anyone else, has proved that such investigations in applied Biology really pay; the sugar-planters of the Islands have found it worth their while to liberally endow his Station, having learnt that he has saved them immense sums by his method of importing into the Islands the enemies of the insect-pests of the crop. This practical work has not been accomplished without laborious and most minute investigations into the life-history and bionomic conditions of the pests and their enemies, carried out by him or by skilled assistants under his direction. These enquiries have led to a most exact knowledge of the ways of parasites and hyper-parasites, and, while the object was originally a commercial one, a flood of light has been thrown on the scientific aspects of insect bionomics.

I regret to hear that Dr. Perkins's health has suffered in the course of his long-continued labours, owing to exposure during his travels at high elevations and in the damp regions of the Islands.

On the ground of his distinguished work in field natural history, in systematic investigation, and in applied biology, the Council have awarded the Linnean Medal to Dr. Perkins, and I have great pleasure in handing it to you for his acceptance.

Prof. Poulton made a suitable acknowledgment, and undertook to convey the medal to the recipient.

The General Secretary having laid before the Meeting certain obituary notices of deceased Fellows and others, the proceedings terminated.

OBITUARY NOTICES.

ALGERNON SIDNEY BICKNELL was the son of Elanan Bicknell, of Herne Hill, Surrey, a well-known collector of pictures, and born on the 9th October, 1832. Possessed of ample means, he gave his attention to botany, astronomy, and alpine exploration, travelling much and never happier than when in such scenes as the vast forests of the Amazon River.

At a later period he specially interested himself in fungi, and collected a good library bearing on that group. He showed an extensive series of fungi about the year 1887 at the Royal Horticultural Society, at that time at South Kensington. He was a member of several scientific Societies, amongst them the Woolhope Club and the Royal Geographical Society, but he seems never to have published any account of his travels or researches. He was elected a Fellow of the Linnean Society, 20th December, 1877, and died at Brighton after an operation, on the 26th October, 1911, shortly after completing his 79th year.

[B. D. J.]

HARRY BOLUS was born in Nottingham on April 28th, 1834, the son of Joseph Bolus, a business man of that town. Through the master of his school he became connected with William Kensitt, a merchant of Grahamstown, with whom he served as apprentice from 1850-1852, having landed at Port Elizabeth on March 28th, 1850. From Grahamstown he went to Port Elizabeth as book-keeper in a mercantile house, and, at the end of 1855, after a short visit to England, returned to South Africa to Graaff-Reinet, where he spent the succeeding nineteen years, acting for a short time as Secretary to the Midland Fire Insurance and Trust Company. In 1874 he left Graaff-Reinet and joined his brother, a stock-broker in Cape Town, retiring from business in 1895. He died at Oxted, Surrey, on May 25th, 1911, soon after his arrival on what was to be the last of his many visits to England, and was buried in the churchyard of the village.

Although no doubt interested from early youth in the observation of natural objects and phenomena, his connection with botany may be said to date from 1862, when he attended a short course of public lectures on botany, given by Prof. F. Guthrie, who the year before had been appointed to the newly founded Graaff-Reinet College. His friendship with Guthrie furthered his botanical inclinations, and the loss in 1865 of his eldest son and the desire for relief from the sad blow, drove him into the arms of the science in which his interests centred henceforth. For years his activity in this domain was confined to collecting and observations in the field, and studies in his own herbarium. Thorough and methodical habits and a keen eye not only helped him to build up a valuable collection of his own, but also made him a most useful contributor to his numerous correspondents, whose inquiries and wishes he always met with great liberality.

Foremost in his correspondence stood Kew, the connection with which extended from 1867 to his death, and was much strengthened by repeated visits, on which he used to bring with him large sets of specimens for study and comparison.

With Bolus started a second and most successful period in the botanical exploration of South Africa, the first having closed with Ecklon and Zeyher in the forties. The success was partly due to his own numerous travels, of which Prof. H. H. W. Pearson published a valuable list in the *South African Journal of Science* for 1911, and partly to the stimulus which he so well understood to awake and keep alive in others. His botanical journeys took him all over Cape Colony, from Cape Town to Namaqualand and Pondo-land, and from Algoa Bay to Kimberley. He also visited the Orange Free State, and three times the Transvaal. Thus he acquired an unparalleled field knowledge of the flora of South Africa, and especially of Cape Colony. It found a masterly expression in his 'Sketch of the Flora of South Africa' (1886), and again in a more matured and condensed form in his 'Sketch of the Floral Regions of South Africa' (1905); but on the whole he was not a prolific writer. He was too modest to gauge exactly the value of his experience and first-hand knowledge, and perhaps also too cautious in a field where the inadequate literary and herbarium resources at his disposal certainly provided ample opportunity for blocking and pitfalls. However, he published a number of "Contributions to South African Botany" in various places, and with respect to two families he rose far above the level of the casual contributor. The immensely rich and varied Orchid flora of the Cape fascinated him early. In 1882 he gave us a "List of Published Species of Cape Orchids" in the *Journal of the Linnean Society*, followed in the same place by five "Contributions" (1884-1890) dealing with the family, whilst a paper on the Orchids of the Cape Peninsula, illustrated by himself, appeared in the *Transactions of the South African Philosophical Society* in 1882. The plan of illustrating as many South African members of the family as possible was carried further in his '*Icones Orchidearum Austro-Africanarum Extratropicarum*,' of which the first part (50 plates) came out in 1892, the second (50 plates) in 1896, both constituting Volume I., and a third, Volume II., in 1911, the revision of the last proof-sheets of this having been concluded by him on the very eve of his death. The other family which deservedly claimed his special attention was the Ericaceæ, which in the genus *Erica* attains to such a marvellous number of species. Bolus, together with his friend Prof. Guthrie, undertook to elaborate the genus for the '*Flora Capensis*,' and, after Guthrie's death in 1899, he finished the difficult and troublesome task, the work occupying over 300 pages with descriptions of 469 species in the fourth volume of the '*Flora Capensis*' (1905). Yet another publication has to be mentioned, namely, '*A List of Flowering Plants and Ferns of the Cape Peninsula*,' which he elaborated in conjunction with Capt. (now Major) A. H. Wolley Dod. It is

the fruit of his labours in the district where he resided for so long a part of his life, and was published in the Transactions of the South African Philosophical Society in 1903.

Allusion has been made to the stimulating influence he exercised over South Africa, thereby reviving the interest in the botany of the country. It was done mainly through his example and an extensive and sustained correspondence. This naturally ceased with his death. But in founding the Harry Bolus Chair of Botany in the South African College in 1902, he has secured for botany a permanent footing in the centre of one of the most remarkable floras of the world. It was a fine expression of public spirit, worthy of the man who was ever mindful of the common good and a staunch believer in education in the widest sense. He also provided in his will for the maintenance and extension of his herbarium and botanical library, which are now in the charge of the South African College. Although he was averse to coming to the front in public life, the integrity of his character and his ripe experience made him a desirable member of public bodies, and so he served on the board of the Colonial Orphan Chamber (since 1882), on that of the South African Public Library (since 1897), as a Trustee of the South African Museum (since 1906), and on the Council of the South African College (1908-1910). He was President of the South African Philosophical Society for the Session 1886-87, and an Original Fellow and Member of the Council of the Royal Society of South Africa. In 1903 the Cape University recognized his scientific merits by giving him the honorary degree of D.Sc., whilst in 1909 the South African Association for the Advancement of Science awarded him the South Africa Medal and Grant for Scientific Research. The Linnean Society numbered him among its Fellows since 1873.

Harry Bolus was a self-made man. From modest beginnings he rose by force of character to the position of a man of public standing and scientific recognition. Taken away from his Nottingham school when still in his boyhood, he educated himself up to the level not only of a superior student of science, but also a man of refined and liberal tastes. The independence and freshness of his mind made his company always enjoyable and stimulating, whilst the stern mettle of his manly character attached him and his memory permanently to those who had the good fortune of his friendship. Death has gently dealt with him and given him back to his old home when his work was done.

[O. STAFF.]

JEAN BAPTISTE EDOUARD BORNET, M.D., Membre de l'Institut, the well-known algologist, was born at Guérisny (Nièvre) on 2nd September, 1828. He studied under Tulasne and Lévillé, and early in his career turned his attention to lichens and algæ, groups which he continued to investigate throughout his life. His death took place at Paris, on December 18th, 1911.

The researches carried out by Bornet with regard to the life-history of lichens were especially important. He isolated and specifically determined the algæ which entered into the composition of a large number of species, and described the method by which the hyphæ envelop the algæ, coming to the conclusion that the gonidia of lichens can always be referred to a species of alga. The strong support which he gave Schwendener, materially helped in securing the early recognition of the theory of the dual nature of lichens.

His work on marine algæ was no less noteworthy. The magnificent drawings in 'Notes Algologiques' and 'Études Phycologiques' testify to his skill and to the careful manner in which he investigated the structure and development of these plants. Amongst systematic works his joint monograph with Flahault on the Nostocaceæ is perhaps the best known, being a masterly revision of a group that was previously in the greatest confusion.

Dr. Bornet was elected a Foreign Member of this Society on 1st May, 1870, and awarded the Linnean Medal in 1891; he was also a Foreign Member of the Royal Society, "Membre Fondateur" and Past President of the Société botanique de France, and "officier" of the Legion of Honour. His interest in marine algæ continued to the end. On the most friendly terms with British algologists, he never spared time or trouble in giving them the benefit of his opinion and advice. [A. D. COTTON.]

The removal by the hand of death, on the 20th April, 1912, at Nice, of Mrs. OGILVIE-FARQUHARSON, of Haughton, takes from us a woman who exercised a notable influence on the affairs of this Society in the matter of the full admission of women to all the activities of the Society.

MARIAN SARAH RIDLEY was born at Privet, Northamptonshire, on the 2nd July, 1846, the eldest daughter of the Rev. J. Nicholas Ridley, of Hollington, Hants. In 1881 she published a little volume, 'A Pocket Guide to British Ferns,' and a paper at the British Association at Aberdeen in 1885, on the distinctive characters of British Mosses; these seem to be her only contributions to scientific literature. In 1883 she was married to Mr. R. F. Ogilvie-Farquharson, of Haughton, and at Tillydrine, Kincardine O'Neil, the remainder of her days were spent, save when the calls of health or the cause she had most at heart, drew her from her home.

In June 1900 an application from Mrs. Farquharson respecting the admission of women as Fellows was laid before the Council, and received attention at several subsequent Councils. In view of the doubt expressed as to whether the Charter permitted the admission of women to the Fellowship, counsels' opinion was taken, to the effect that the Charter did not empower the Society to admit women. Upon this a memorial, set on foot and supported by a considerable number of Fellows favourable to the

admission of women, was presented to the Council early in 1902, and a circular inviting the opinions of the Fellows was issued in March of that year; the return of the papers in response to this enquiry showed a large majority in favour of applying for powers to admit women (301 in favour, 126 against, with 313 abstentions). The meeting of the 15th January, 1903, was made special, and the motion to proceed for enlarged powers was carried by a large majority. Upon this the Treasurer, the present Sir Frank Crisp, undertook to procure an additional Charter, granting wider powers in certain other directions as well, which was done at the sole cost of the Treasurer. The new Charter was granted in April 1904, and the Bye-laws were amended in accordance with it; the first election of women as Fellows took place on the 15th December, 1904, and their formal admission on the 19th January, 1905. In this first election Mrs. Farquharson did not succeed at the ballot, but subsequently, on the 5th March, 1908, she was elected Fellow, and the effort of many years crowned with success.

By this time Mrs. Farquharson was suffering from heart trouble, and the probable bad effect of excitement on a weakened organ, prevented her coming forward for formal admission. She died, as stated above, at Nice, and was buried by the side of her husband, at Alford, in the county of Aberdeen. [B. D. J.]

ALFRED FRYER (1826-1912).—To those to whom he was known the death of Alfred Fryer came as a shock, for notwithstanding his age, he was very active up to the last.

Born of an old Cambridgeshire family of the fenland, he was a typical type of the fenman. He often said "Ah! I knew him by the scowl of his brow," meaning he could identify a fenman anywhere.

He was a good letter-writer; from the time I first knew him till his death, his letters make 1480 pages, mostly referring to the genus *Potamogeton*; for which he was undoubtedly our best authority on the British species. He had a wonderful memory for the various forms all around Chatteris; at every dyke or ditch he took one to, he could point out each plant; these he had studied for years, both at home and in nature.

His 'Monograph of the British *Potamogetons*,' unfortunately unfinished at his death, with the plates by Robert Morgan, will ever remain as a monument to his memory. The nine quarto published parts appeared from 1898 to 1900.

He had an enormous collection of dried specimens of the genus, and was very liberal with them; he was also very well read in ornithology, entomology, and conchology.

It was very pleasant to see the estimation he was held in all around Chatteris; he never confined himself to roads or footpaths, but went where inclination led him, and everywhere he was received as though he was on his own ground.

He was elected an Associate of the Society on the 16th December, 1897, and died at Chatteris, 26th February, 1912, where he had carried on the business of nurseryman. His printed contributions to Science, besides the unfinished monograph referred to above, consisted in papers to the 'Journal of Botany' for a series of years, from 1883 onwards, on his special genus *Potamogeton*, and bear witness to the careful and valuable results he evolved from these studies.

[ARTHUR BENNETT.]

ALBERT HARRISON was born in 1860 at the New Pale Farm, Frodsham, Cheshire, and received his education at the Liverpool Institute, leaving at the age of 15 to enter the sugar refinery of Henry Tate & Sons in Liverpool, and three years later was transferred to the London branch, where he obtained rapid promotion, and finally was made manager.

The home of his boyhood being close to Delamere Forest, he early imbibed a liking for Natural History, and he usually spent part of his annual holiday in that forest. It was not till 1888 that he took up the study of the Lepidoptera in a serious way. Then he joined forces with his brother-in-law, Mr. Hugh Main, and the two experimented on forms of *Aplecta nebulosa* and *Pieris napi*, and latterly on *Boarmia repandata*. Mendelian results greatly interested him. He was a member of many biological associations, and in 1899 was President of the Entomological Society. He was elected Fellow of the Linnean Society 3rd November, 1898; he was also Fellow of the Zoological, Royal Microscopical, and Chemical Societies. He died suddenly of apoplexy at his house at South Woodford, on 28th August, 1911, and was buried at Alvanley, in Cheshire.

[B. D. J.]

JOSEPH DALTON HOOKER.—By the death of Sir Joseph Hooker on Sunday, December 10th, 1911, in his 95th year, the Linnean Society has lost at once the most renowned of all its Fellows and one of the most remarkable men who ever devoted his life to the advancement of Science. Hooker's ancestry and parentage do not require to be set forth here in detail. The son of Sir William Hooker, the Founder of Kew, he hailed from East Anglia—a part of England which can hold its own with any other region in the number and eminence of the Naturalists which it has cradled. Had Hooker lived another six months it would have been exactly 70 years since he was elected into the Linnean Society (June 7th, 1842). Nor does this lapse of time represent the full working life of this great man, for already on his election he had won his spurs as a botanical traveller in the Antarctic. His life-long friend, Asa Gray, in a letter written about this time to Sir William Hooker, says* :—

"I heard within a few days that Ross's expedition had been

* 'Letters of Asa Gray,' p. 307.

heard of from Rio. Doubtless Joseph will have reached home before this letter arrives, and I may congratulate him—and yourself—upon his most gratifying success, which has laid a broad and sure foundation for his scientific eminence. His ‘*Flora Antarctica*’ must be of the very highest interest and importance.”

To young Hooker after his return Gray also wrote *: “You now stand in a perfectly unrivalled position as a botanist, as to advantages, &c. . . . and if you do not accomplish something worth the while, you ought not to bear the name of Hooker.” The sequel showed how well placed was Gray’s high encouragement. No father can ever have had more just reason for pride than Sir William in the achievements of his son.

Hooker, though born in Suffolk, was taken to Glasgow at the age of four when his father was appointed to the Professorship of Botany in the University. Here he received his education so far as school and college are concerned. He graduated in Medicine in 1839, being then 22 years of age. With the world to conquer he seized the first big thing that chance afforded.

As Hooker has told us, his father’s house “was the resort of voyagers and travellers from all parts of the world On the occasion of a visit from Ross, he told my father of his hopes of obtaining the equipment of an expedition to discover the South Magnetic Pole; whereupon my father brought me to him as a youth who would be delighted to accompany him as Naturalist. Ross received me very kindly, and told me that if I could prepare myself for such a duty, he would take me. The Antarctic Expedition saw my debüt in a scientific career” †. To travel had always been Hooker’s dream as a child, and he relates how he used to look at the pictures in Cook’s voyages sitting on his grandfather’s knee (Dawson Turner). The one that took his fancy most was the plate of Christmas Harbour, Kerguelen’s Land, with the arched rock standing out to sea, and the sailors killing penguins. He was consumed with the desire to see that rock and knock penguins on the head. By an odd coincidence this was one of the first places he visited with the Antarctic Expedition.

The fascination and interest of this desolate island, the flora of which he fully described, appears to have remained throughout his life. In a letter to my father, written during a visit to the Scottish Highlands ‡, Hooker says:—

“Skye Geology, too, impressed me much. The island resembled some of the Antarctic ones in many particulars; and though volcanic on the whole, it contains beds representative of most or all the British Formations from the Laurentian upwards! and I could not help wondering if future discoveries, say in

* ‘*Letters of Asa Gray*,’ p. 317.

† Anniversary Dinner of the Royal Society, Nov. 30, 1887. Sir Joseph Hooker’s reply to the toast of “*The Medallists*,” p. 13.

‡ Dated Aviemore, Sept. 25, 1876.

Kerguelen's Land, may not throw as much light on the Geology of the Antarctic regions as Skye alone would have done in respect of Northern Europe. Perhaps the fossil wood of Kerguelen's Land may be the nucleus of a great light."

On his return from the Antarctic, Hooker at once took in hand the description of his rich collections and the elucidation of the Southern Floras. This task culminated in the publication of the first instalment of the 'Flora Antarctica' in 1847. It is interesting to note at this period the influence of the atmosphere of Bryology in which the son of so famous a Bryologist as Sir William Hooker had been brought up. His earliest published papers all dealt with Mosses, and on his return from the Antarctic it was the Mosses, Liverworts, Lichens and Algæ of the voyage which he first worked out in detail.

In a letter to my father, written in his 91st year, Hooker states that the first plant he ever dissected was a Moss*, and though throughout the middle period of his life he concerned himself mainly with the flowering plants, the intention was always cherished and sometimes referred to, so my father tells me, of returning to the group once more when the burden of official duties should fall from his shoulders. This intention, as is well known, was never realised; the remarkable and difficult genus *Impatiens* absorbing him during the last ten years of his life.

In the course of his travels Hooker had come into frequent contact with fossil plants, and in 1846 he was appointed Botanist to the Geological Survey of Great Britain. This field evidently was a congenial one, and he pursued it for a while with marked success. It is not necessary, however, here to record in detail Hooker's work as a Palæobotanist, for it has formed the main subject matter of the Presidential Address to the Fellows of this Society delivered last May by our retiring President, Dr. D. H. Scott. This, at any rate, is certain. Had Hooker devoted his life to this branch, the history of fossil botany in this country must have been profoundly changed. The post of Botanist to the Geological Survey would appear to have been long obsolete, and, so far as the State is concerned, palæobotany has not received the encouragement which it deserves, having regard to the magnitude of the coal industry of Great Britain and to the intrinsic importance of the subject.

Though his energies were directed into other fields, Hooker always maintained an ardent interest in the progress of fossil botany right up to the end of his life. It is stated of his contemporary, Lindley, that he abandoned the pursuit of fossil botany lest it should beguile him from the straight path of systematics; in the case of Hooker no doubt the superior attractions of travel and phytogeography proved too strong.

* "Happily my eyes are as good and my fingers as nimble at dissecting under the microscope as when I commenced at 10 years of age—I think with a *Polytrichum*," from letter dated Jan. 22nd, 1908.

Be this as it may, towards the close of 1847 Hooker was on his way to India, and thus on the threshold of perhaps the largest of the interests that entered into his very full life. This journey came as a natural sequel to the Antarctic; he was anxious to become acquainted with the Tropics, and chose India in preference to South America because so much of its geography as well as the botany was "involved in a mystery equally attractive to the traveller and the naturalist."

The immediate outcome of this journey, which extended over three years, was the 'Himalayan Journals,' a book which fittingly takes its place beside 'The Voyage of the Beagle'—from the unpublished proof-sheets of which Hooker had drawn inspiration before his departure with Ross to the Antarctic. The perusal of these 'Journals' shows how incomparably well fitted was Hooker for the rôle of traveller in a strange country full of difficulties. Though circumstances ultimately determined that the botanical results should prove the richest, because pursued and analysed farthest, Hooker was no mere botanist. These notes appeal equally to the ethnologist, the zoologist, the geologist, the meteorologist, and the geographer. In several of these fields, especially Indian topography, Hooker left an enduring mark; had he chosen he could have attained to the highest eminence in any.

Here are a few extracts, taken at random from the 'Journals,' which illustrate some of his many sides:—

"During my ten days' stay at Zemu Samdong, I formed a large collection of insects, which was in great part destroyed by damp; many were new, beautiful, and particularly interesting, from belonging to types whose geographical distribution is analogous to that of the vegetation. The caterpillar of the swallow-tail butterfly was common, feeding on umbelliferous plants, as in England; that of a Sphynx was devouring the euphorbias; the English 'painted-lady' was common, as were 'sulphurs,' 'marbles,' 'whites,' 'blues,' and Thecla, of British aspect but foreign species."

"As the rains advanced, insects seemed to be called into existence in countless swarms; moths, cockchafers, glow-worms, and cockroaches made my tent a Noah's Ark by night, when the candle was burning; together with winged ants, may-flies, flying earwigs, and many beetles, while a very large species of daddy-long-legs swept across my face as I wrote my journal, or plotted off my map."

"Bhomtso [in Tibet] is 18,590 feet above the sea; it presented an infinitely more extensive prospect than I had ventured to anticipate No village or house is seen throughout the extensive area over which the eye roams from Bhomtso, and the general character of the desolate landscape was similar to that which I have described as seen from Donkia pass. The wild ass grazing with its foal on the sloping downs, the hare bounding

over the stony soil, the antelope scouring the sandy flats, and the fox stealing along to his burrow, are all desert and Tartarian types of the animal creation. The shrill whistle of the marmot alone breaks the silence of the scene, recalling the snows of Lapland to the mind; whilst the kite and raven wheel through the air, with as steady a pinion as if that atmosphere possessed the same power of resistance that it does at the level of the sea. Still higher in the heavens, long black V-shaped trains of wild geese cleave the air One plant alone, a yellow lichen (*Borrera*) is found at this height, and that only as a visitor; for Tartar-like, it migrates over these lofty slopes and ridges, blown about by the violent winds."

"The Khasias are superstitious, but have no religion; like the Lepchas, they believe in a supreme being, and in deities of the grove, cave, and stream. Altercations are often decided by holding the disputants' heads under water, when the longest winded carries his point. Fining is a common punishment, and death for grave offences. The changes of the moon are accounted for by the theory that this orb, who is a man, monthly falls in love with his wife's mother, who throws ashes in his face they have names for the twelve months; they do not divide their time by weeks, but hold a market every fourth day. These people are industrious, and good cultivators of rice, millet, and legumes of many kinds . . . They keep bees in rude hives of logs of wood."

The 'Himalayan Journals' were followed in 1855 by the first volume of the 'Flora Indica' in conjunction with his old college friend, Thomas Thomson. Though the work was never continued in the form then planned, this volume is famous for its Introductory Essay extending over 260 pages. This essay, besides presenting a masterly analysis of the vegetation and physical features of India, gives us the foundations of the study of systematic botany set forth as only Hooker could set them forth. It also shows Hooker as the fearless critic of current methods in systematic botany by which that branch had become encumbered to its serious disadvantage.

The Indian flora was taken up again later in what is Hooker's greatest floristic work, 'The Flora of British India,' which appeared in seven volumes between the years 1872 and 1897. In addition to this Hooker completed the 'Ceylon Flora' of Henry Trimen, and concluded his labours in this field with 'A Sketch of the Vegetation of the Indian Empire' (1904). Nor can it be said that Hooker ever laid aside his studies on the Indian Flora, for the closing years of his life were devoted to a monograph of the genus *Impatiens*. In this connection the following extract from a letter to my father, describing his method of work (dated Jan. 22, 1908) is of interest:—

"I have been at work ever since I retired on *Impatiens*, and have monographed all the Indian and Malayan Species—well

on to 200—and am now at China proper, from whence I have 140 species, of which not a dozen are natives of India! I do not know which is the more difficult task—to remove and dissect a flower, or to classify the species, or to describe their variable and grotesque organs for many points in which there is no technical terminology. Many single flowers of these curious species especially took 2 and even 3 hours to lay out the parts for drawing and description—and after all is done I doubt whether what I see, draw, and describe will fit in with the living flower! As it is, I defy the acutest botanist to tell me from the best dried specimens whether there are 2 or 4 lateral sepals, whether the anthers are acute or didymous, or—even approximately—the true form of a single floral envelope. To get at these you must remove and moisten the flowers and spread out every organ flat *under* water. This done, I secure them all on slips of gummed paper as evidences of the fidelity? of my sketches that go with the analyses into the Herbarium; no reagent has helped me.

“I have the loan of the Paris Chinese Balsams, 70 species, two-thirds different from the 80–90 species of the Herb. Kew. I find the bracts (as to situation) a prime character. Indeed, you may divide the genus into two groups, one with the lower pedicel of the raceme bracteate at the base, as in most, or ebracteate, as in *Noli-me-tangere*—the latter are few in India but abound in China. Of course the 1-flowered species puzzle you, but that is a detail!

“After the bracts I think the anthers come next, but these are so small and so crushed in dried flowers that the getting at their form is often a long affair. Lastly, the sectional character of one region won’t do for another; which is no wonder when you consider that of some 64 species of India W. of the Bay of Bengal not 5 are found in Burma and countries E. of the Bay, and only 2 or 3 in China.

“I will bore you no further—my head is as twisted as a balsam flower and as upside down.”

Almost everything Hooker undertook was conceived on the grand scale and carried through with a tenacity and continuity of driving power that was simply marvellous. What was true of the Indian Flora applied also to the Antarctic. Though interrupted, this was brought to a triumphant conclusion in the ‘Introductory Essay to the Flora of Australia,’ published in 1859. This, no doubt, was Hooker’s most brilliant effort, and it appeared just at the right moment. In it are discussed the general phenomena of variation in plants and the distribution of plants in space and time. Then follows the detailed handling of a special case—that of the Australian Flora. The headings of the sections in a single chapter will serve to illustrate the topics considered:—*Circumscription of area of species, and causes of it; Relative distribution of natural groups of plants; Insular floras, and analogies between them and mountain floras, and between the geological ages of*

insular and other floras; Existing conditions will not account for existing distribution; Effects of humidity in modifying distribution; Effects of the Glacial Epoch, and Darwin's views thereon. Coming just when it did, this essay was of enormous service to the cause of Darwinism. Hooker had always been Darwin's right hand man, and it was due to his well-judged intervention in conjunction with Lyell, that the famous Darwin-Wallace joint note on Natural Selection was presented to the Linnean Society on July 1st, 1858. The matter, however, need not be pursued here, as it has been recently embodied *in extenso* in a special volume issued by the Society on the occasion of the Jubilee celebration on July 1st, 1908. Hooker's friendship and scientific connection with Darwin was undoubtedly the most important experience of his lifetime, and was frequently alluded to by him with gratitude.

Hooker, now 40 years of age, had reached the plenitude of his powers, and must have been a great figure in those days. He had undertaken two great journeys in regions hitherto veiled in obscurity, and by his masterly handling of the enormous masses of data he had accumulated, he became the virtual founder of phytogeography as a science. In 1855 he was appointed Assistant Director of Kew under his father; and all this time he was behind the scenes with Darwin, doing yeoman service in the cause of evolution with his great stores of knowledge, good judgment, and fine critical powers.

At the present day we often incline to be envious of the apparent ease with which average men belonging to a former generation took their place as recognised authorities whilst still quite young; we conceive the world to have been less crowded then and the public less satiated with the results of modern science. Whatever substratum of justice there may be in such jaundiced reflections, they do not apply to the case of Hooker. This philosophically-minded and robust man of action, quick in observation and sound of judgment, always ready to help with acute criticism, such a man was bound in any age and in any field to tower above his contemporaries. The best material brought up in the best of schools, the early Victorian days threw into fitting relief this vivid and indomitable personality which really belongs to the heroic age. A hero indeed he was to the younger men of his time, as I gather from what my father tells me of his own feeling towards Hooker before he came to Kew.

For ten years (1855-1865) Hooker served under Sir William Hooker, and on the death of the latter naturally succeeded to the Directorship of Kew, a position which he held till 1885.

His official connection with Kew was marked by the continued active development of the Gardens along the lines laid down by his father. It was under the Hookers that Kew rose into fame, and I agree with Prof. F. O. Bower * that it would serve no useful

* An Oration on Sir Joseph Dalton Hooker. Glasgow, 1912, p. 15.

purpose to attempt to disentangle the respective shares of father and son in its advancing fortunes. So far as Kew is concerned the appearance of the Hookers may best be regarded as a single phenomenon. Sir William's policy had been large and enlightened, and it was not likely that the son would modify its main outlines. Apart from material expansion—and many new features were introduced—the official duties of the Director increased continually. Administration, together with correspondence with Government departments and Colonial gardens, would have overwhelmed a weaker man, but Hooker never permitted them to interrupt or seriously abate his scientific work. In Hooker, the man and botanist never relapsed into the official. At the same time he kept in the closest touch with the detailed administrative work of Kew. In my childhood Hooker was a familiar figure in the Gardens, going his daily round between eleven and one o'clock, commonly in company with Smith the Curator, or with the appropriate head of a department. These encounters were much appreciated by us children, for "Dr. Hooker" always had a cheery greeting and took an interest in our pursuits. I remember one day his challenging me to swarm up one of the wire stays of the great flagstaff, and, when my feet dangled over his head, his peremptory request that I should descend. I don't know whether Hooker was what would be called a "children's man," but we were all immensely devoted to him; perhaps because he kept our individualities distinct and identified himself with our interests. In his own house on the occasion of children's parties, and my recollection of the Christmas parties with "tree" and magic lantern-slides is vivid, Hooker, although he didn't hang about, always came in to welcome us on arrival, and to say good bye. I have also seen him emerge as a roaring lion from under the drawing-room table, and a very good lion, too!

As Director, Hooker never let a chance slip of picking up a good man. The following reference to Mr. Baker, afterwards Keeper of the Herbarium, occurs in a letter to my father in 1865. "I wonder whether Baker would ever care to come and work at Kew for a few weeks at a time if we paid his expenses and offered £1 a week; it might be the means of getting him on the staff eventually?"

He also looked after his subordinates, as is well illustrated by the following extract from the same letter:—

"I had a talk with ——. He corresponds with the 'Cottage Gardener,' but offered to discontinue it. I told him that I had no objection, but that no part of his time between 8.30 and 5 should be devoted to it. I also spoke of smoking, and of the necessity of resting after meals—which you should be told of, too! He suffers from dyspepsia (no wonder) and promises reform." To what extent — may have changed his ways I cannot say, but I well remember that my father always used to rest on the sofa for a quarter of an hour after luncheon, a habit

probably attributable to advice from Hooker, for I don't think such an idea would ever have occurred to him spontaneously! And also by this (1871):—

“I am pounding the Board to get an Assistant for Smith, who can hardly stagger along under his loads of duties of all sorts.”

In those days Kew was under the Board of Works, and later Hooker had a good deal of trouble with one of the Parliamentary heads. It is no use raking over this old controversy; suffice to say that Hooker more than held his own and was victorious in the end. I imagine no man was less tolerant of dictation and unintelligent interference than Hooker. During the seventies of last century there was a local agitation—doubtless promoted by the owners of houses along the Richmond Road—to have the brick wall which enclosed the Gardens on this side replaced by iron railings. Hooker's reply was to add another five or six feet to the height of this wall for a considerable part of its length, and so it remains to the present day.

I have heard the term “hasty” applied to Hooker, but cannot say how far it is justified. It may have been the “defect” of his quality for sound and rapid generalisation. Darwin in one of his letters reproaches Hooker for being “down” on second-rate men, and there is no doubt that Hooker used to express himself emphatically as to bad craftsmanship or waste of time.

C—— is not doing any good. He is putting out for Mueller bad specimens of the commonest garden things and putting them up in clumsy parcels that I am ashamed to send out”*.

It will be realised how annoyed Hooker must have been with the wretched C——, for he himself not infrequently sent out plants with his own hands—a habit acquired on his travels. My father tells me that the very first time he ever met Hooker, on the occasion of his arrival at Kew in 1858, he found him making up such parcels to send away in the little room on the right of the Herbarium door.

The period of Hooker's Directorship included numerous publications of value to systematic botany, of which the ‘Genera Plantarum’ was in many ways the most important and indispensable. In this great work, undertaken in conjunction with George Bentham, the whole of the genera of flowering plants were diagnosed and delimited; its publication extending from 1863 to 1882. To Hooker, of course, systematic botany was not an end in itself but an essential instrument in the solution of the higher problems, the laws that control evolution and dispersal of species, and the relation of physical changes and geology to these laws.

Hooker never lost his taste for travel nor failed to make opportunity for it. Among his minor and later journeys may be mentioned his trip to the Atlas Mountains of Morocco in 1871. His travelling companions were John Ball, the famous alpinist, and George Maw, well-known for his elaborate monograph on the genus

* Letter dated 1871.

Crocus. The following extract from a letter written from Tetuan gives us a glimpse of this trio in the field:—

“I say that Ball finds this or that because he beats me *hollow* in botanising and is making a splendid herbarium. I find my eyesight quite fails me as a collector; indeed, I have been remarking for two years now that I cannot read the garden labels with my spectacles even, except I stoop down*. Mr. Maw has a marvellous eye also, especially for bulbs. The aggregate knowledge of Ball and Maw as to European plants is simply astounding. Ball knows the smallest flowerless scrap of hundreds of obscure things (e.g. *Medicago*, *Carex*, and such like), and Maw recognises the bulbs by leaf, however like the long grass they grow amongst.”

In the summer of 1877 Hooker in company with Asa Gray, the great American botanist, undertook a journey of three months’ duration in California and elsewhere in the United States of America. Of this journey Asa Gray wrote†:—

“Never were such busy people as Hooker and I the whole time. In fact, I was bound to make Hooker see just as much as possible within our limited time, and it seemed on the whole best for us to see very much in glimpses and snatches rather than far less more leisurely and thoroughly. He will have told you of our over nine thousand miles of travel together, and of how he liked it. . . . We should like to do it all over, and more. But especially we should like to see California in green attire. Not that we are not interested and taken with the sere aspect of these western regions in summer, which we fancy more than Hooker does. In fact, the greenness of England is so congenial to him that he took more delight in our eastern States, which he had mere glimpses of, than in all the wide western region, though, of course, there was more to learn in these.”

The rambling spirit in Hooker enabled him fully to enjoy more modest excursions. The following is a typical extract from a holiday letter written from the High Force, Teesdale, in 1865. As indicated in the previous extract from Asa Gray, bleak monotonous landscape was little to his liking.

“I call the country here *hideous* away from the river banks, which are charming. We are vastly pleased with the place, for even the hideous moors make capital hale walking ground and the moraines are most interesting. . . . We enjoy this place very much; it is just the sort of climate for my wife, and I am rapidly getting into that condition when after breakfast dinner is the only subject worth a thought. I have botanised Cronkley pretty well and got most of the good plants—nothing new as yet, but a little *Juncus* of which I send specimen enclosed, it is most abundant

* There was nothing seriously amiss with his eyesight, as the footnote at p. 49 shows.

† ‘Letters of Asa Gray,’ 1893, p. 671.

hereabouts, growing with *supinus*, but always quite different. The roots feel knotted; it swarms from the Force up to the top of Cronkley and never varies. If you can't make it into a new species I must send it to Babington! Bentham is puzzled with it."

The following account of a visit to Backhouse's nursery at York was written at the same time, and is of interest for its defence of the system of cultivation under glass that is usually followed in botanic gardens.

"We were delighted with Backhouse's nursery. The collection of Alpines is wonderful and entirely successful, and we ought to have something of the kind at Kew*.

"The underground fernery rather disappointed me, though very wonderful in its way. Many of the things do better than in pots, many worse. But I am beginning to think that my dislike to Ward's case cultivation and these devices of Backhouse and Bewley, &c., arises from the fact that though nearer imitations of nature than our house-and-pot system, they are failures by direct comparison with nature. No one compares the house-and-pot system with nature and no comparison is suggested: with these systems it is the contrary—I am taken to a muggy, close, damp, slimy hole, the contrast of which to the fresh air of heaven in the plants' native habitat is too violent, and the fact of the plant growing as well in the one case as the other, rather shocks than gratifies."

The occasional addresses and lectures delivered by Hooker at meetings of the British Association, of which he was President at Norwich in 1869, reach a very high standard indeed. Those dealing with Geographical Botany were especially remarkable.

Hooker's eminence marked him out for the Presidential chair of the Royal Society (1873-77), and it is a tribute to his marvellous vigour that he was able successfully to grapple with the onerous duties of this post during his period of full work at Kew. As a rule the presidentship is held by a veteran already in the enjoyment of some leisure from the active pursuits of his life.

Unlike his father, Hooker had little direct experience as a teacher of botany in academic institutions, though he held an assistantship in the botanical department of the University of Edinburgh for a brief period on his return from the Antarctic. None the less the educational side of botany always interested him deeply, and was often the subject of comment in his letters to my father. The following, written in 1862, merits repetition at the present day:—

"I do not approve of working a professoriate like a school or a college coach; it is a mistake depend upon it. Good free

* Realised in 1882.

lecturing, attention to fundamentals, and working with schedules* is more than enough for $\frac{4}{5}$ of the men, and quite enough for 3 months work with men who have other things to attend to. With such coaching the men become absolutely helpless when turned out—all self-reliance is gone."

His views on the scope and importance of botanical training are given at some length in the Introduction to the 'Flora Indica.' I am indebted to Mr. Alfred Milnes, of the University of London, for the information that Hooker acted as Examiner in Botany to the University during two periods of five years each. Those of his writings best known to students are Hooker's 'Students' Flora of the British Islands' (1870), the most scholarly of all our floras, the English edition of Le Maout and Decaisne's 'General System of Botany,' translated by Mrs. Hooker (1873), a Primer on Botany (1876), and Bentham & Hooker's 'Handbook of the British Flora' (1887).

To the publications of our Society Hooker was a copious contributor. The best known of his papers are perhaps his "Outlines of the Distribution of Arctic Plants" (1861), and the very important monograph "On *Welwitschia*" (1863). The discovery of this plant had aroused a very lively interest at the time, and Hooker's Memoir was a detailed, intensive study of its morphology, development, and histology. In recent years, at the initiative of Prof. Pearson, of the South African College, *Welwitschia* has been the subject of a fine series of additional papers extending our knowledge in many ways. It is, however, safe to say that, subject to the methods of investigation and amount of material available half a century ago, the original account still holds its place. This and a few other papers in the same field show Hooker's capacity to work successfully along lines which were not generally pursued, at any rate in this country, for another fifteen or twenty years.

In addition to a fine incisive literary style, Hooker had artistic gifts of a high order which were freely employed in connection with his pursuits. None but an artist could have knocked off the panoramic views reproduced in the first edition of the 'Himalayan Journals,' whilst his drawings of plants, tissues and the like were excellent. The sheets of dried plants which passed through his hands for description gained much in value from the sketches of analyses with which it was his practice to embellish them.

In the conduct of the affairs of our Society Hooker always showed the greatest activity; and he served on the Council for periods aggregating twenty years. It was largely at his instigation that the 'Journal' of the Society was founded; the circumstances are given in the following passage†:—

* The reference is doubtless to the schedules introduced by J. S. Henslow, by means of which students could exhibit the salient external features of a plant.

† Extracted from Jackson's Life of George Bentham, 1906, pp. 169-170.

"A small dinner-party in their rooms (at 91 Victoria Street) on 2nd March (1855) was arranged with Professor T. Bell, President of the Linnean Society, and Dr. Hooker, to discuss starting an octavo journal on behalf of the Society. This was ultimately achieved, but with great opposition from J. J. Bennett, the Secretary, and Robert Brown, opposition which made Bentham almost hopeless of success. The custom then was to issue one part of the Transactions annually, and the idea of a quarterly journal to those trained in the leisureliness of Robert Brown, was novel and distasteful."

In this connection the following letter to Dr. Daydon Jackson, the last which Hooker wrote to the Society, though it refers to a trivial matter, will be read with interest. It is dated July 13, 1911.

"I have just received from Linn. Soc. a most interesting number for me. I had no idea that 70 years ago I had gutted the Falkland Islands botanically so thoroughly.

"But my chief object in writing is to ask whether it might not be expedient to have the edges of the leaves of the Journal cut before issue? The time and *temper* it costs me to cut the leaves of the many books I have to read is I fear registered against me afoot, and, in these days of innumerable books that one must read, it would be a mercy to have the leaves cut, of which the Geographical, Royal, and Statistical Societies' Journals set good examples,"

The suggestion as to the cutting of the leaves of the Journal was at once adopted by the Council.

As we have seen, Hooker in retirement maintained his activity to the last, and the output of this period alone would have been a creditable record for an ordinary man. His interest in the progress of botany was unabated and the men of younger generations derived much encouragement from his kindly sympathy and frank criticism. Although in retirement, no one ever dreamt of thinking of Hooker as on the shelf; he was always consulted when anything important was afoot, and he remained to the last by universal acclaim the greatest of living botanists.

Of public honours a goodly share was showered upon Hooker, the most notable perhaps being the Copley Medal of the Royal Society (1887), and the Order of Merit (1907). From this Society he received one of the first two Linnean Medals in 1888—the other going to Owen—and in 1897 a Medal struck to commemorate his 80th birthday. He was also the recipient of one of our Darwin-Wallace Medals on the occasion of the celebration held by this Society in 1908—at which celebration he was present and played a leading part.

For the list of papers contributed by Sir Joseph Hooker to the publications of this Society, herewith appended, I am indebted to the courtesy of Dr. Daydon Jackson. I have to thank my father,

who was Hooker's colleague at Kew for nearly 30 years, for much information and for access to the correspondence from which numerous extracts have been drawn.

The portrait which accompanies this notice is reproduced from the photograph taken by Mrs. Cameron in 1868. It has always been counted an admirable likeness of Sir Joseph Hooker in middle life. [F. W. OLIVER.]

*List of Papers by Sir J. D. HOOKER in the issues of
the Linnean Society.*

1. In the Transactions.

- 1847. An enumeration of the Plants of the Galapagos Archipelago, with descriptions of those that are new. Trans. xx. pp. 163-233.
- 1847. On the Vegetation of the Galapagos Archipelago, as compared with that of some other tropical islands and of the Continent of America. Trans. xx. pp. 235-262.
- 1856. On the structure and affinities of Balanophoreæ. Trans. xxii. pp. 1-68; pls. 1-16.
- 1857. On the growth and composition of the Ovarium of *Siphonodon celastrineus*, Griffith, especially with reference to the subject of its placentation. Trans. xxii. pp. 133-139, pl. 26.
- 1859. On the origin and development of the Pitchers of *Nepenthes*, with an account of some new Bornean plants of that genus. Trans. xxii. pp. 415-424, pls. 69-74.
- 1859. On a new genus of Balanophoreæ from New Zealand, and two new species of *Balanophora*. Trans. xxii. pp. 425-427, pl. 75.
- 1860. Illustrations of the Floras of the Malayan Archipelago and of Tropical Africa. Trans. xxiii. pp. 155-172, pls. 20-28.
- 1861. Outlines of the Distribution of Arctic Plants. Trans. xxiii. pp. 251-348, pl. 32 (map).
- 1861. On three Oaks of Palestine. Trans. xxiii. pp. 381-387, pls. 36-38.
- 1863. On *Welwitschia*, a new genus of Gnetaceæ. Trans. xxiv. pp. 1-48, pls. 1-14.
- 1865. Description of some new and remarkable species of *Aristolochia* from Western Tropical Africa. Trans. xxv. pp. 185-187, pl. 14.
- 1886. On the *Castilleja elastica* of Cervantes, and some allied rubber-yielding plants. Trans. 2nd Ser. Bot. ii. pp. 209-215, pls. 27, 28.

2. In the Journal (Botany).

- 1856. On some collections of Arctic plants, chiefly made by Dr. Lyall, Dr. Anderson, Herr Miertsching, and Mr. Rae, during the Expeditions in search of Sir John Franklin, under Sir John Richardson, Sir Edward Belcher, and Sir Robert McClure. Journ., Bot. i. pp. 114-124.
- 1856. On the Botany of Raoul Island, one of the Kermadec group in the South Pacific Ocean. Journ. i. pp. 125-129.
- 1860. On *Tropiera*, a new Mauritian genus of Calycifloral Exogens, of doubtful affinity. Journ. v. pp. 1-2.
- 1860. On *Barteria*, a new genus of Passifloreæ from the Niger River. Journ. v. pp. 14-15.

1861. On the Vegetation of Clarence Peak, Fernando Po; with descriptions of the Plants collected by Mr. Gustav Mann on the higher parts of that Mountain. Journ. vi. pp. 1-23.
1864. On a new *Heliconia* with the habit of a *Musa*, sent from New Granada by Dr. A. Anthoine to the Royal Gardens, Kew. Journ. vii. pp. 68-69.
1864. On the Plants of the Temperate Regions of the Cameroons Mountains and Islands in the Bight of Benin, collected by Mr. Gustav Mann, Government Botanist. Journ. vii. pp. 171-240, pl. 1.
1865. On the Identity of *Pinus Peuce*, Griseb. of Macedonia, with the *P. excelsa* of the Himalaya Mountains. Journ. viii. pp. 145-147.
1869. On the true *Fuchsia coccinea* of Aiton. Journ. x. pp. 450-461.
1874. On the Subalpine Vegetation of Kilima Njaro, E. Africa. Journ. xiv. pp. 141-146.
1874. On *Hydnora americana*, R. Br. Journ. xiv. pp. 182-188.
1875. On the discovery of *Phylica arborea*, Thouars, a tree of Tristan d'Acunha, in Amsterdam Island, in the S. Indian Ocean, with an enumeration of the Phanerogams and Vascular Cryptogams of that Island and of St. Paul. Journ. xiv. pp. 474-480.
1875. Observations on some Indian species of *Garcinia*. Journ. xiv. pp. 484-486.
1882. On *Dyera*, a new genus of rubber-producing plants belonging to the Natural Order Apocynaceæ, from the Malayan Archipelago. Journ. xix. pp. 291-293.
1882. Preliminary Note to Prof. Watt's Indian species of *Primula*. Journ. xx. p. 1.
1884. Introductory Note to Mr. C. B. Clarke's Notes on the Flora of Parasnath, a mountain of North-western Bengal. Journ. xxi. p. 252.
1885. List of the Plants collected by Mr. Thomson, F.R.G.S., on the Mountains of Eastern Equatorial Africa, by Prof. Daniel Oliver, F.R.S.; with observations on their distribution by Sir J. D. Hooker, F.R.S. Journ. xxi. pp. 392-406. [Sir Joseph Hooker's Obs. are on pp. 392-396.]
1904. On the species of *Impatiens* in the Wallichian Herbarium of the Linnean Society. Journ. xxxvii. pp. 22-32.

With T. Thomson.

1857. Praecursores ad Floram Indicam: being Sketches of the Natural Families of Indian Plants, with Remarks on their Distribution, Structure, and Affinities. Journ. Bot. ii. pp. 1-29 [Campanulaceæ].
1857. — [Saxifrageæ, etc.]. Journ. ii. pp. 54-96, pls. 1, 2.
1858. — " " " 97-103.
1858. — [Caprifoliaceæ]. " " " 163-180.
1859. — Balsamineæ. " iv. " 106-157.
1861. — Cruciferae. " v. " 128-181.
1864. On the genus *Euptelea*, Sieb. & Zucc. Journ. vii. pp. 240-244, pl. 2.
1864. Description of a new genus of Scrophularineæ from Martaban [*Brandisia*]. Journ. viii. pp. 11-12, pl. 4.

The following dates may be used to supplement the foregoing vivid sketch of a remarkable personality.

The late Sir Joseph Hooker was born on the 30th June, 1817, at Halesworth, Suffolk, where his parents were settled for a short time, on property belonging to Dawson Turner, his maternal grandfather. He received his early education at the High School, and in the Faculty of Arts and the Medical Faculty in the University of Glasgow. Having taken his degree in 1839, he was appointed Assistant Surgeon to the Royal Navy, and as such he accompanied Sir James Ross on his Antarctic Expedition of 1839-1843. After his return he was Assistant to Professor Graham in the University of Edinburgh, and from 1845-1847 Botanist to the Geological Survey. His famous travels in India cover the four years from 1847 to 1851. In 1855, he became Assistant Director to his father at Kew, on whose death, in 1865, he succeeded to the Directorship, which he held until his retirement in 1885. It was during this period that he travelled in Palestine (1860), in Morocco (1871), and in the United States (1877).

He was twice married, first to a daughter of Prof. J. S. Henslow in 1851, who died in 1874, and second, the widow of the late Sir W. Jardine in 1876, who survives him. He died at "The Camp," Sunningdale, 10th December, 1911, and was buried five days later at Kew, beside his father, amidst a large gathering of his friends and colleagues.

By will he left £100 free of duty to the Linnean Society, and the reversion of his large collection of medals, which are now shown on loan by Lady Hooker in the rooms of the Society.

[O. S. & B. D. J.]

GEORGE MAW was born in London on December 10th, 1832. His father was John Hornby Maw, then partner of a firm of surgical instrument makers in London. George received his early education at home, mainly at Hastings, where his father had removed in 1839. At the age of 16 or 17 he went to the Agricultural College at Cirencester with the idea of becoming a farmer. Although he was very successful there, gaining five certificates of honour and a certificate of merit, he gave up the agricultural career and joined his younger brother, Arthur, in establishing in 1850 a factory of encaustic tiles at Worcester, which two years later was removed to Benthall, Broseley, Shropshire. His father had been a man of much knowledge and culture and especially artistic gifts, and so was his son George.

His reputation as a chemist was considerable. As geologist he was a fertile and many-sided writer and successful worker. Among many papers his account of the structure of the Great Atlas, with his demonstration of the former extension of glaciers in that chain of mountains down to 5800 feet, and his treatise on the disposition of iron in variegated strata may be mentioned especially. Nevertheless, geologists seem to be inclined to count

him rather as a botanist than one of their own brotherhood. This may be on account of his early inclinations towards botany and his love for collecting plants wherever he went, be it for his herbarium or for his beautiful garden at Benthall Hall, whence not a few novelties found their way into other English gardens. His merits in this respect were summed up by Sir J. D. Hooker in these words: "No one of late years, or perhaps ever, has collected with his own hands so many of these (*i.e.*, hardy herbaceous plants) for transmission to England, cultivated them with more success, or distributed them with more liberality." But his claim to recognition as a scientific botanist rests almost entirely on a very narrow field, which, however, he exploited to the utmost with the keen eye of the trained observer and the love of the enthusiast. It is circumscribed by the limits of the genus *Crocus*, which he studied with rare thoroughness in the field and in his garden, where he succeeded in forming an almost complete living collection of the 67 species recognised by him. The result of his labours, which extended over more than 10 years, was a monograph which was published in 1886. It is the more valuable as it is beautifully illustrated from his own drawings, which also show him as an artist of no common powers. A long series of articles in 'The Gardeners' Chronicle' and a paper on "Notes on the life-history of a *Crocus*, and the classification and geographical distribution of the genus," in the Journal of this Society (vol. xix. 1882), preceded the publication of the monograph. Extensive journeys in Europe and travels in North Africa (1871) and Asia Minor (1877) contributed as much to his botanical education, as they went to enrich his collection of living plants and especially of Crocuses. Best known of them is his visit to the Great Atlas of Morocco, which he undertook in company of Sir Joseph D. Hooker and Mr. John Ball in 1871.

He joined the Linnean Society in 1860. The dedication of a volume (1874) of the 'Botanical Magazine' by Sir Joseph Hooker and of a volume of 'The Garden' (1878) by Mr. William Robinson, were fitting tokens of recognition of his enthusiastic love of plants. Unfortunately the latter part of his life was clouded by ill-health which obliged him to seek seclusion. He left Broseley in 1886, and died in retirement at Kenley, Surrey, on February 7th of the present year. A portrait of him was published in 'The Garden,' vol. xiv. No. 371, and a review of Benthall Hall, his home, in 'The Gardeners' Chronicle' of February 12th, 1881. The number of 'The Garden' quoted also contains an enumeration of the journeys undertaken by Mr. Maw up to 1878. [O. STAFF.]

OCTAVIUS ALBERT SAYCE was born in 1862, educated at the Scotch College, Melbourne, and entered business, becoming a commercial traveller. During this period he made constant use of the microscope, and succeeded in securing a position on the staff of Melbourne University.

A good field naturalist, especially in the Coleoptera, he passed through a course of practical biology, where his previous acquaintance with chemical manipulation stood him in good stead. His first important paper on *Gryllotalpa* when printed was sent to our late colleague, Prof. G. B. Howes, who sent a postcard simply inscribed "Good. Go on.—G. B. H.," which encouraged Sayce to persevere.

About the year 1902 he turned his attention to the Crustacea, and in 1906 was appointed Demonstrator and Assistant Lecturer on Bacteriology in the University; it was shortly after this that his paper on *Koonunga cursor* was published in our Transactions (Zool. xi. pt. 1, 1908); on the 2nd December, 1909, he was elected A.L.S., a distinction greatly valued by him.

In April 1911, he was appointed the first Director of the Bacteriological Institute of South Australia, but did not live to take up his new position. He died of pneumonia after a few days' illness, on the 29th April, 1911, and was buried on the 1st May following. The day of his death had been fixed for his entrance on his new duties. His widow passed away eight weeks later, on the 24th June, largely due to the shock of her husband's death.

A full bibliography will be found in 'The Victorian Naturalist' for June 1911, p. 27, appended to a sympathetic notice of Mr. Sayce, from which the foregoing notice has been derived, supplemented by a letter from Mr. F. Chapman, A.L.S. [B. D. J.]

EDUARD STRASBURGER.—The intelligence of the unexpected and sudden death of EDUARD STRASBURGER on the 19th May, 1912, was received on the eve of our last Anniversary Meeting, and saddened the many amongst our Fellows who knew and honoured our distinguished Foreign Member.

He was born in Warsaw, on 1st February, 1844, and received his first botanical training at the University of Bonn, under Hermann Schacht, and where Julius Sachs was then a teacher in the Poppelsdorf Agricultural Academy. Schacht died suddenly in 1864, and Strasburger, thus deprived of his professor, decided to migrate to Jena, to benefit by the lectures of Nathan Pringsheim, whom he had already met at Bonn. In after years he owned the impetus derived from Pringsheim, and his association with Ernst Haeckel. It was due to the latter that, upon the retirement of Pringsheim in 1869, Strasburger was called to the chair, at the age of 25 years. It was in this very year that the first production of Strasburger's pen saw the light: "Die Befruchtung bei den Coniferen," which happened to offend Hofmeister, because the author sought to prove that the "corpuscula" do not corresponds to the embryo-sacs of Angiosperms, but are archegonia.

Three years later he issued his "Die Coniferen und die

Gnetaceen' in octavo, with a quarto atlas of plates, and in 1873, his briefly entitled "Ueber *Azolla*."

In 1875 came out his "Ueber Zellbildung und Zelltheilung," which reached the second edition the next year, and the third in 1880, besides versions in other languages. From this time onward, Strasburger was the foremost worker in botanic cytology, and his labours, extending over 35 years, have proved extraordinarily fruitful. 'Ueber Befruchtung und Zelltheilung' came before the world in 1876, as did his 'Studien über Protoplasma.' His next important work was 'Die Angiospermen und die Gymnospermen,' in 1879.

Prof. Johannes von Hanstein, who had succeeded to Schacht's chair at Bonn, after Strasburger had settled at Jena, died on the 27th August, 1880, and the latter was called upon to succeed him early in the following year, after 12 years' labour at Jena. In April of 1882 he produced 'Ueber den Bau und das Wachsthum der Zellhäute,' which work he described as in part three years old, thus in some measure the result of his work in Jena.

Soon afterwards he addressed himself to a wider circle and to younger students, by issuing 'Das botanische Practicum' early in 1884, a work which attained its 4th edition in 1902 (of which a summary has gone through many editions), and was translated by Prof. Hillhouse as 'Handbook to Practical Botany' in 1886. Later in the same year, he brought out his 'Neue Untersuchungen über den Befruchtungsvorgang bei den Phanerogamen als Grundlage für eine Theorie der Zeugung.'

In 1889 began his important series of researches, published under the name of 'Histologische Beiträge,' of which seven parts came out under these titles:—

1. Ueber Kern- und Zelltheilung im Pflanzenreiche, nebst einem Anhang über Befruchtung. 1888.
2. Ueber das Wachsthum vegetabilischer Zellhäute. 1889.
3. Ueber den Bau und die Verrichtungen der Leitungsbahnen in den Pflanzen. 1891. (He was accustomed to speak of this volume of 1000 pages as "mein grosses Buch.")
4. Ueber das Verhalten des Pollens und die Befruchtungsvorgänge bei den Gymnospermen—Schwärmosporen, Gameten, pflanzlichen Spermatozoiden und das Wesen der Befruchtung. 1892.
5. Ueber das Saftsteigen.—Ueber die Wirkungssphäre der Kerne und die Zellgrösse. 1893.
6. Ueber Reduktionstheilung, Spindelbildung, Centrosomen und Cilienbildner im Pflanzenreich. 1900.
7. Zeitpunkt der Bestimmung des Geschlechts, Apogamie, Parthenogenesis und Reduktionstheilung. 1909.

On the occasion of his assuming office as Rector of Bonn University, in October, 1891, he delivered an address, which was issued as 'Das Protoplasma und die Reizbarkeit.'

The work which has attained the widest circulation and popularity is that entitled:—‘*Lehrbuch der Botanik für Hochschulen*,’ written with the assistance of Drs. F. Noll, H. Schenck, and A. F. W. Schimper, appearing in 1894; it has since reached its tenth edition (1910). It has been translated in many other languages, and is now in its fourth edition in English.

In a more popular manner we have his ‘*Streifzüge an der Riviera*,’ the second edition of which came out in 1904, and in English as ‘*Rambles on the Riviera*,’ London, 1906, with 87 coloured plates. We cannot here catalogue his many shorter papers on various topics of botanic interest, but one in particular deserves mention, if only for the adverse criticism it called forth, which gave him much pain, though he maintained his position stoutly. It was “*Meine Stellungnahme zur Frage der Pflropbastarde*,” in *Ber. deutsch. bot. Ges.* xxvii. (1909) 511–528.

Strasburger was no mere conventional professor. In his pleasant quarters at Poppelsdorfer Schloss, formerly the palace of the Electors of Cologne, he was easily accessible, and delighted to be the sympathetic friend of his students; the many pupils attracted by his reputation to study under him, will gladly bear witness to the regard in which he was universally held. Supreme in his chosen department, he interested himself in many other directions, of which ecology may be adduced as an instance. This notice is not the place for a critical estimate of Strasburger’s work, but the frequency with which he changed his opinions regarding the interpretation of certain cytological phenomena, proved disquieting to some; in this he was only searching further, and was ever ready to submit his former opinions to the test of later work or new discoveries.

Few botanists were more appreciated in our own country; he was a Foreign Member of the Linnean Society from 6th May, 1880, of the Royal Society from 1891; further, he was the recipient of the Linnean Medal in 1905, when it was received for him by Sir Dietrich Brandis, and acknowledged by a letter then read, which explained that official duties hindered him from attending personally. He was present at the Darwin-Wallace Celebration on the 1st July, 1908, and received a silver copy of the special medal then struck. In his native country he enjoyed the title of “*Geheimer Regierungsrath*.”

He died from heart-failure on the date above-mentioned, his wife having predeceased him by several years. A *Festschrift* was in preparation for his 70th birthday, which it is hoped may yet see the light, though as a memorial volume in place of the congratulatory work intended. [B. D. J.]

FRANCIS TAGART, whose legacy of £500 free of legacy duty has recently been received by the Society, was the son of Mr. William Tagart, was born in 1839 and died on the 25th November, 1911, at his house, Old Sneed Park, Stoke Bishop. His business

life was passed in the City of London as a merchant, and amongst other subsidiary duties, he was a Director of the Surrey Commercial Dock Company, and at the time of his death, was one of H.M. Lieutenants for the City of London. He was proposed as a Fellow of this Society on the 6th March, 1855, by his brother, the Rev. Edward Tagart, who died a few years later, Edward Newman, and R. Wakefield, the election taking place on 1st May of that year. On retiring from business he resided on his estate near Bristol, and his last visit to the rooms of the Society was about two years before his death, when he expressed his intention of making a bequest in favour of the Society.

The sum thus bequeathed has been invested as a separate fund bearing the donor's name, the income to be applied to the purposes of the Society as the Council may determine from time to time.

[B. D. J.]

June 6th, 1912.

Prof. E. B. POULTON, F.R.S., President, in the Chair.

The Minutes of the Anniversary Meeting of the 24th May, 1912, were read and confirmed.

Dr. William John Dakin, Dr. Annie Porter, Prof. Alexander Meek, and Mr. William Edward Balston were admitted Fellows.

Mr. William Henry Daun, M.A. (Cantab.), the Rev. John Stewart Müller, M.A. (Cantab.), Mr. Edwin Percy Phillips, M.A. (Cape), and Mrs. Eleanor Mary Reid, B.Sc. (Lond.), were severally balloted for and elected Fellows.

The President read the proposed alterations of Chap. II. Sect. 2 and 3 of the Bye-Laws for the second time.

The President announced that he had appointed the following to be Vice-Presidents for the ensuing year:—Prof. J. STANLEY GARDINER, Mr. HORACE W. MONCKTON, Miss EDITH R. SAUNDERS, and Dr. DUKINFIELD H. SCOTT.

Prof. A. MEEK read his paper, "On the Development of the Cod, *Gadus morrhua*."

Mr. CHARLES HEDLEY read his paper entitled "Palæogeographical relations of Antarctica." (See p. 80.)

A discussion ensued in which the following took part:—Dr. Otto Stapf, Sec.L.S., Dr. G. B. Longstaff (visitor), Mr. Clement Reid, Mr. T. A. Sprague, Prof. C. Chilton, Dr. Marie Stopes, and Dr. A. Smith Woodward, the author briefly replying.

Mr. RUPERT VALLENTIN showed a series of slides from photographs taken by himself during a recent visit to the Falkland Islands, extending over many months. He divided them into views of the scenery, the native plants and the fauna, alluding to the changes in progress, and the loss of endemic types.

Miss MAY RATHBONE showed a portion of an unusually thick stem of *Hedera Helix*, stating that this specimen was taken from a plant of ivy growing on a tree in Cheshire. The stem, which was somewhat triangular, measured $18\frac{1}{3}$ inches in circumference and $5\frac{1}{2}$ inches in diameter at its widest part. The phloem, which was very well marked, measured about $\frac{3}{8}$ of an inch in its thickest part. The rings in the wood were not very distinct but about 46 could be counted. The wood was very heavy. The specimen, which was $18\frac{1}{4}$ inches long, weighed 14 lbs., and the specific gravity was 0.91, but, as it was weighed without removing the bark, this is only an approximation.

Dr. MARIE STOPES exhibited a plant of *Cardamine pratensis*, on behalf of Mr. A. D. LANG, showing bulbils in abundance from the blade of the leaf as well as the axil of the flowers.

Dr. Stapf remarked on the interest of the exhibit, and hoped by cultivation, that the causes of this phenomenon would be ascertained.

Mr. CHARLES SILLEM placed on the table specimens of the flowering branches of a rambler rose, all the flowers showing median proliferation of an unusual character.

Mrs. LONGSTAFF showed a specimen of *Lycaste Barringtoniae*, Lindl., brought from Jamaica four years ago, but flowering now for the first time. Mr. W. Fawcett remarked that the type of this plant is in Smith's Herbarium, possessed by the Society, under the name of *Epidendrum Barringtoniae*.

June 20th, 1912.

Prof. E. B. POULTON, F.R.S., President, in the Chair.

The Minutes of the General Meeting of the 6th June, 1912, were read and confirmed.

Mrs. Eleanor Mary Reid, B.Sc., Miss Maud Samuel, B.Sc., Mr. William Henry Daun, M.A., and Mr. John Coney Moulton, M.A., were admitted Fellows.

Mr. Ernest John Bickford, Mr. Thomas Ford Chipp, B.Sc. (Lond.), Mr. Alfred Eugène Craven, Mr. Nevin Henry Foster, M.R.I.A., M.B.O.U., Mr. William Norman Sands, and Mr. Francis James Stayner, were proposed as Fellows.

Miss Ethel Mary Doidge, M.A., Mr. Thomas Bainbrigge Fletcher, and Mr. John Gervaise Turnbull, were elected Fellows.

The proposed alterations in the Bye-Laws, Chap. II. Sect. 2 and 3, which had been read from the Chair on the 2nd May and 6th June, were submitted to a ballot and approved by the Fellows.

The President announced that it was proposed to have a dinner of the Society on Thursday, 31st October, to be followed by a reception in the rooms of the Society. Further notice to be given in due course.

Mr. HUGH SCOTT briefly introduced the following papers, relating to the fauna of the Seychelles and other islands, the first three and the fifth being communicated by Prof. J. STANLEY GARDINER, F.R.S., F.L.S.

1. Mr. C. G. LAMB on the Lonchæidæ, Sapromyzidæ, Ephyræidæ, Chloropidæ, and Agromyzidæ.
2. Dr. IGNACIO BOLIVAR on the Saltatorial Orthoptera.
3. Dr. A. SICARD on the Coccinellidæ.
4. Mr. HUGH SCOTT on the Coleoptera Lamellicornia and Adephaga.
5. The late Dr. BUDDE-LUND on the Terrestrial Isopoda of the Percy Sladen Expedition, which was introduced by the Rev. T. R. R. Stebbing, F.R.S.

Mr. H. STUART THOMPSON exhibited 33 coloured drawings of Alpine flowers by Mr. George Flemwell, with some proofs of plates taken from them.

Prof. ARTHUR DENDY, F.R.S., introduced an exhibition of four white canaries, of a race bred by Mrs. John Martin, of Martinborough, New Zealand, and brought home by Dr. A. E. A. Palmer, of the same Dominion, who was present, and explained that they were shown in this country for the first time. Miss Florence Durham (visitor) also spoke.

Prof. DENDY then showed the disc-like cocoons constructed by the larvæ of a Saw-fly, *Phyllotoma aceris*, which had been found in large numbers at Malden Station, in Surrey, and were characterised by jumping movements like those of the well-known Mexican "jumping bean." With them he showed specimens of sycamore leaves from which portions of the mesophyll had been eaten by the larvæ, while circles cut out of the upper cuticle had been utilised to form one side of the cocoon, the other side being spun by the larva.

Mr. R. W. H. Row related his experiments with these insects, and stated that the jumping began when the cocoons were exposed to sunshine, and appeared to be caused by an instinct to escape the light.

Mr. J. C. MOULTON had brought with him from Borneo, living examples—now seen for the first time in this country—of the remarkable Trilobite-like coleopterous larvæ, well known in the Oriental tropics. Mr. C. J. Gahan (visitor) referred to the previous knowledge of these larvæ, which belonged, he considered, to the Lycidæ, and spoke of the probability of their never passing into an imago stage. The discussion was continued by Mr. H. N. Ridley, Mr. S. G. Paine, Mr. J. C. Moulton, and the President.

Mr. S. T. DUNN introduced his paper on the revision of the genus *Millettia*.

Dr. OTTO STAFF, Sec.L.S., read a paper by Mr. CARL CHRISTENSEN, communicated by Prof. J. STANLEY GARDINER, on the Ferns of the Seychelles and Aldabra. The lantern-slides to illustrate this paper had not arrived, and their exhibition was postponed.

Prof. GARDINER also communicated Mr. C. WARBURTON's paper on the Acarina of the Percy Sladen Expedition, which was read in title, as was also Canon NORMAN's investigation of *Synagoga mira*.

Capt. C. F. U. MEEK's paper entitled "Correlation of Somatic Characters," was placed before the meeting, with the Author's own statement of his conclusions.

ABSTRACTS.

I.

The Distribution of *Elodea canadensis*, Michaux, in the British Isles in 1909. By A. O. WALKER, F.L.S.

[Read 2nd November, 1911.]

THE history of this plant, so far as our islands are concerned, is fairly well known. The first locality in which it appears to have been recorded, by Mr. John Dew in 1836, was at Waringstown, County Down, Ireland. In 1843 it was reported by Dr. G. Johnston, of Berwick-on-Tweed, in Dunse Loch, Berwickshire. By 1850 it had spread to many rivers and reservoirs in Great Britain and become a serious nuisance to navigation and drainage—so much so in Lincolnshire, that in 1852 Mr. Rawlinson was sent by the Government to advise as to clearing the dykes in the fens. Attempts to eradicate it by dredging failed, and it was found that the only way of dealing with it successfully was to leave it alone, when it appears to gradually diminish or die out altogether.

In 1884 Mr. J. D. Siddall, of Chester, published a valuable paper on the structure and history of this plant (Proc. Chester Soc. Nat. Sci., Part iii. 1884, p. 125), from which most of the above information is derived. He states that experience shows, "that if left alone, its habit is, upon first introduction into a new locality, to spread with alarming rapidity; so much so as literally to choke other water plants out of existence. But this active phase reaches a maximum in from five to seven years and then gradually declines, until at last the *Anacharis* ceases to be a pest and becomes an ordinary denizen of the pond, river, or canal as the case may be." This maximum period in the neighbourhood of Chester seems to have been between the years 1867 and 1873; in 1884 Mr. Siddall says it is "far less abundant than formerly," and in April 1909, he wrote that he had some difficulty in finding a piece in a locality where in 1873 all other vegetation was choked out by it. He also says that the circulation of the protoplasm in the leaf-cells was very feeble compared to what it was in 1873—an important fact, possibly indicating diminishing vitality in the species. The recollection of the writer, who resided in Chester from 1856 to 1889 and remembers the canal there so choked with the weed as to greatly impede the boat traffic, quite bears out Mr. Siddall's statements as to its abundance in 1867 to 1873 (*l. c.* p. 131).

In 1909 it appeared to the writer that sufficient time had elapsed to enable an opinion to be formed as to the probability of the plant becoming a permanent denizen in the British Isles, and with this view a circular was sent to most of the corresponding

Societies of Natural Science of the British Association asking for information on the subject.

To this, as may be seen, numerous replies were received and much valuable information obtained, for which the writer now heartily thanks all his correspondents. One unavoidable defect in the scheme consists in the fact that the period of maximum abundance having begun about 1852 (in the Lincolnshire Fens, the river Cam, &c.), there would be few botanists whose memories would extend far enough back to be able to compare the present with the past. But, with due allowance for this, the indications are that on the whole the plant is not now so abundant as to be a nuisance but has generally established itself as a denizen. It is, however, probable that there are waters to which it has not yet penetrated and in which it may still flourish as in previous years. Such may be the case with the artificial water of Moulton Grange, Northants, where Mr. H. N. Dixon, Hon. Sec. Northants Nat. Hist. Soc., describes it as "a great pest." It would be interesting to know whether it has ever re-appeared in water where it has flourished and died out, as might conceivably happen after a lapse of time sufficient for the bottom to recuperate. If it has not done so anywhere, it would not be unreasonable to attribute it to a diminution of the vitality of the species as suggested above.

The following reports from different Counties from the south of England to Banffshire are probably sufficiently representative of the whole of Great Britain.

DEVONSHIRE.

Mr. J. L. Sager, M.A., on behalf of the Exeter University College Field Club, writes: "It occurs in more or less abundance in the Rivers Exe, Culm, and the Exeter Canal. It has been known to flower occasionally, but fruits have not been seen."

Mr. H. J. Morgan, a member of the above Society, says that for some time before 1878, "the right bank of the Exe from the Bridge to the Gas Works (over 200 yds.) was one thick mass of *Elodea*. Since that date this plant has become by no means plentiful in this place. Many ditches on Exminster Marshes were almost filled with *Elodea* about seven years ago. There is certainly not so much there now."

DORSETSHIRE.

Mr. N. M. Richardson, President Dorset Field Club, reports: "Mr. Filleul says he sees it in every stream he fishes, but our own native weeds far more than hold their own against it."

Mansell-Pleydell, 'Flora of Dorset,' 1874: "Streams and ponds, common; thoroughly established, becoming a most troublesome plant."

HAMPSHIRE and ISLE OF WIGHT.

From the Flora of the above by F. Townsend, 1904: "Abundant in Hants and Isle of Wight. Too common in many localities. Introduced to lake in Leigh Park in 1847 with American aquatics and discovered in Leicestershire the same year."

Not recorded in Bromfield's 'Flora of Isle of Wight,' edited by Sir W. J. Hooker & T. B. Salter, 1856.

SUSSEX.

Rev. E. Elman, per Mr. T. Hilton: "About Lewes and the Cuckmere Valley and in many other places in Sussex—cannot say if less abundant than formerly" (Brighton and Hove Nat. Hist. Soc.).

Mrs. T. R. R. Stebbing, F.L.S., writes: "It used to be found in Cold Bath Ponds at Rusthall, Tunbridge Wells, and the Lake at Warberry House."

'Flora of Sussex,' F. H. Arnold, 1887: "Ditches, pools, rivers, common." By F. C. S. Roper, Eastbourne, 1875: "Ditches, locally abundant."

SURREY.

Mr. J. G. Baker, F.R.S., writes in 1909: "In a pond in the garden at Kew it was once very plentiful and has now quite died down, its place being taken by *Nitella*."

Holmesdale Nat. Hist. Club, Reigate: "River Mole and various ponds and ditches in the district. Not quite so plentiful as it used to be."

KENT.

"Now (1899) quite common in ponds, ditches, and slow streams throughout the county." First record 1855 ('Flora of Kent,' Hanbury & Marshall).

River Beult, near Headcorn (A. O. W., 1910). Not seen at Ulcombe. Lenworth Mill Pond, Maidstone, "grows alarmingly" (not signed). ["Still abundant there." A. O. W., 24th Sept., 1912.]

The Stour, "less abundant than formerly," Rev. C. H. Fielding.

MIDDLESEX.

"Very common here in ponds and streams: rivers Brent, Colne, and Paddington Canal" (Ealing Scientific and Microsc. Soc. per Mr. Offord).

"About the same in last 10 years, not increasing" (ditto).

HEREFORDSHIRE.

"Very abundant in River Wye, canals, streams, and pools, 1865 to 1889. Since that date becoming more scarce. First observed in Herefordshire about the year 1855" (Rev. Augustin Ley).

R. Lugg, by Mill Street; marsh, Leominster; pool at Sellark, Ross; mill sluice (Rev. A. L.).

WORCESTERSHIRE NATURALISTS' CLUB.

"In nearly every piece of water in the County of Worcester."
 "Showing signs of decrease" (Amphlett & Rea).

'Botany of Worcestershire,' E. Lees, 1867: Avon division, several places; Severn division, many places.

STAFFORDSHIRE.

Rivers Trent, Sow, Penk, Weaver, Dove, and most of the canals and watercourses in the County.

"Not nearly so plentiful as 20 years ago, has disappeared from one or two spots where it used to occur plentifully, but is still to be found in most of the rivers and canals" (not signed).

Mr. J. E. Nowers, Burton-on-Trent, says it is very abundant there. "I think it is about the same quantity as it was 30 years ago." Mr. G. R. Jebb, C.E. (Dec. 1910), says: "*Elodea* has practically but not entirely disappeared from most of the ditches or canals in Shropshire and Staffordshire which used to be choked with it."

SHROPSHIRE.

E. W. Bowers, Wem: Shropshire Union Canal and R. Roden; a friend "seems to think this weed on the decrease."

Rev. J. B. Meredith, Kinnerley Vicarage: "As to American Weed, a mill pond near here was dredged clean, well mudded out, some four years ago, and is fuller than ever now."

Dr. W. P. Hamilton, Botanical Referee Caradoc and Severn Field Club: "The Severn, S. U. Canal, meres and pools everywhere." Mr. H. E. Forrest, Shrewsbury, confirms the above.

SUFFOLK.

Mr. P. G. Boswell, Hon. Sec. Ipswich Field-Club: "*Elodea* is now very common in all our ponds and streams round here and in the R. Gipping. It appears to be getting more plentiful."

NORFOLK.

Mr. E. T. Daubeney ('Nature Notes,' vol. xviii. 1907, p. 212), says that *Elodea* has disappeared from Narford Lake, near Swaffham, where it was formerly abundant, "leaving nothing in the shape of vegetable growth in its place."

CHESHIRE.

Mr. J. D. Siddall: "In most of the ponds, canals and streams of the district" (Chester Soc. of Nat. Science, &c.) "Much less abundant than 25 years ago and decidedly less robust."

Mr. C. Madeley, Warrington Museum: "Occurs in the Old Quay Canal near Warrington, and in many of the numerous ponds and ditches; perhaps a little less abundant than formerly."

NOTTINGHAMSHIRE.

"Common in rivers, brooks, canals, and ponds throughout the County."

"My own experience of 20 years is that it is *not* increasing, but that *if* there is any change at all it is in the direction of a slow decrease in abundance." Prof. J. W. Carr.

NORTHAMPTONSHIRE.

"It occurs in rivers and ponds in all the districts of Northants" (Druce in Journ. Northants Nat. Hist. Soc., vol. iv. p. 121, 1886).

Mr. Druce writes to Mr. H. N. Dixon: "My own impression is that although *Elodea* was common in the Grand Junction Canal, and I can remember it in 1860 both in Northants and Bucks, it was never a pest. In the sixties it was, however, a great pest in artificial pieces of water such as the Wakefield [Laun] Ponds, where it had to be frequently cut. It is certainly less common now."

First record 1841, Watford Locks, G. J. Canal.

Mr. H. N. Dixon, Hon. Sec. Northants Nat. Hist. Soc., says: "It is just now a great pest in the artificial water of Moulton Grange, the residence of Mr. H. Manfield, M.P."

LANCASHIRE.

Mr. W. H. Heathcote, Hon. Sec. Preston Scientific Soc.: "Very abundant in the Preston and Lancaster Canal; Leeds and Liverpool Canal; Rivers Ribble and Wyre; numerous ponds, &c. I should say more abundant" (than formerly).

"Ponds and ditches, common" (Flora of Preston and neighbourhood by members of the Preston Scientific Soc., 1903).

'Flora of Liverpool District,' C. T. Green, 1902: "Frequent in canals, ditches, and old ponds," Liverpool and Wirral.

YORKSHIRE.

Mr. F. Jowett, Hon. Sec. Bradford Nat. Hist. Soc.: "Aire about Skipton; Leeds and Liverpool Canal; mill dams all over the district; common in wet ditches. The plant is holding its own in all places except in the canal, where it is probably cut up by the screws of the boats."

Mr. F. Barker, Hon. Sec. Halifax Scientific Society: "Very common Calder and Hebble Canal between Halifax and Salterhebble. Several mill dams in the neighbourhood; very firmly established. Opinions differ" (as to its being more or less abundant than formerly).

'Flora of N. Yorkshire,' J. G. Baker, 1863: "The Wiske and ponds at Kirby Wiske. Clifton Ings ditch; Foss Islands near York." In 1909 J. G. B., writes: "It has never been abundant in the North Riding."

'Flora of E. Riding,' J. F. Robinson, 1902. "Common in dykes and drains, but scarcely so conspicuous as it was 12 years ago."

Dr. W. B. Russell writes: "It used to be so abundant in the Derwent at Malton, 30 or 40 years ago, as almost to block the river. It is now almost extinct, being replaced by *Potamogeton pectinatus*."

Mr. Fox Lea: "In canals, Dewsbury and other still waters, ponds, &c. River Wharfe at Ilkley, 1909. Not so abundant as formerly."

LINCOLNSHIRE.

Mr. Douglas Witty (Rydal Mount, Colwyn Bay), writes that "it is generally spread over all North Lincolnshire. In the Ancholme valley it is met with practically everywhere. In the Upper Ings Drain (near Barton-on-Humber) it has increased very considerably in the last decade, and has with other water-growths seriously obstructed the flow of the stream at times.

NORTHUMBERLAND and DURHAM.

C. E. Robson, Hon. Sec., Nat. Hist. Soc., Northumberland, Durham, &c., writes: "There are no canals in the district, and the rivers being swift-flowing and not wide the plant is practically unknown."

N. WALES.

MERIONETH.—Mr. D. A. Jones, Rock House, Harlech, writes: "I found it three years ago in Llyn Gwernen, 2 miles from Dolgelly. It is the only record I have for the County." (Mr. H. E. Forrest says D. A. J. is *the* authority on the Flora of Merioneth.)

MONTGOMERY.—Mr. D. A. J. says it grows at Llanymynech.

DENBIGHSHIRE.—Same authority says it grows at Gresford. Mr. T. R., per Mr. H. E. Forrest, says it is found in the canal 2 to 3 miles from Llangollen as "an ordinary humble weed," not choking any part of the canal. A. O. Walker remembers it about 30 years ago completely filling up the canal there.

SCOTLAND.

GLASGOW DISTRICT.—Mr. J. R. Lees (Glasgow Nat. Hist. Soc.) writes: "Occurs in the Forth and Clyde Canal and in a number of the small streams, ponds, and lakes near Glasgow. Not nearly so abundant as about 20 years ago Seems to be rapidly disappearing in most parts of the district."

BERWICKSHIRE.—First record for Gt. Britain in Dunse Loch by Dr. G. Johnston in 1842.

ISLE OF BUTE.—"Stream at Rothesay," W. H. Heathcote, Sec. Preston Scientific Society; also

INVERNESS, mill stream near, W. H. H.

PERTSHIRE.—Mr. R. Barclay reports (1): "In Tay, Earn, Isla, Towns Lade, Moncreiffe Pond, and very many other ponds throughout the County. (2) Occurs in more localities" (than

formerly) "and on the whole more abundant, though less so in some stations."

ELGIN.—Rev. G. Binnie says it occurs in the Spey near Garmouth, in backwaters, &c.; also in Fochabers Curling Pond. It has greatly increased in a stagnant pool in the old course of the Spey. Still water with a muddy bottom suits it.

IRELAND.

Mr. S. A. Stewart, A.L.S., gives a number of localities in Cos. Down, Antrim, and Derry, and says: "My own experience has been to meet with this plant in practically all suitable waters, save only the lakelets in Rathlin Island, off the Antrim Coast, but only the female plant. No exact data have been secured on the subject of the decrease or otherwise of this plant, but the general opinion seems to be that it is not increasing and is on the wane."

In the same district Mr. W. J. C. Tomlinson gives several localities and adds: "In almost every lake and lakelet in the district." He also says: "It is believed to be more abundant now than ever before within living memory. However, it may be that increased observation of its existence may contribute to the idea that the plant is still increasing here."

Mr. A. W. Stellfox, Hon. Sec. Belfast Naturalists' Field Club, considers that "In the Logan Canal the plant is certainly much less plentiful than, say, 12 years ago. About that time it was necessary to dredge the canal several times during the summer, while at present no obstruction is caused by the growth of the plant."

'Cybele Hibernica,' Moore & More, 1866: "Canals, ponds and streams, as yet rather local in 7 districts out of 12."

II.

Note on the Exhibits on 16th November, 1911.

By Mr. G. CLARIDGE DRUCE.

NEW BRITISH FORMS.

Castalia candida, Schinz & Thellung. Loch near Dunkeld, pointed out by C. H. Ostenfeld, and from Roundstone, Galway (Ostenfeld & Druce).

Viola epipsila, Ledeb. New to Ireland: Killarney.

Stellaria Dilleniana, Moench. Sutton Broad, growing with and flowering at the same time as *palustris*.

Sagina nodosa, var. *moniliformis*, Lange; pointed out by Prof. Massart.

S. glabra, Fenzl. Ben Lawers. Referred to as probably this species.

Rhamnus catharticus, var. *Schroeteri*, Druce.

Alchemilla vulgaris, Linn., var. *acutidens* (Buser). Ben Lawers (C. H. Ostenfeld).

Cirsium palustre, Scop., var. *ferox*, Druce.

Calluna vulgaris, Hull, var. *Erikæ*, Ascherson. Shown to the party on Wessenden Moors, Yorkshire, by Dr. Graebner. And also found on Ben Lawers, at the Lizard, and near Clifden, Galway.

Erica Tetralix $\times$ *vagans* = *E. cinerea* $\times$ *vagans*. Davey, in Journ. Bot. xlviii. (1910), p. 333, but identified by Druce, Schroeter, and Graebner as the above hybrid when the plant was shown to them by the discoverer, Mr. P. D. Williams, at Lanarth, on the St. Keverne Moors. The glandular hairs and other characters prove the presence of *Tetralix*.

Juncus ranarius, Perr. & Song. Southport, pointed out by Dr. Graebner.

III.

Historic doubts about *Vaunthompsonia*.

By the Rev. T. R. R. STEBBING, M.A., F.R.S., F.Z.S.

[Read 7th March, 1912.]

Dr. CALMAN has pointed out to me that my argument for the priority of this form over its rival *Vauntompsonia* is open to a serious objection. The latter spelling of Bate's generic name appears in the second volume of the Royal Dublin Society's Journal, published under date of 1860. But the volume includes several numbers, and Number 10, with which we are here concerned, is dated on p. 63 (its first page) "July, 1858." That the number was actually published in that year, Dr. Calman says, "is shown by the fact, which I owe to Mr. Sherborn, that the part in question was received by the Library of the Geological Society between July 1st and October 31st, 1858, as recorded in the Quart. Journ. Geol. Soc. xv. p. 149, 1st Feb., 1859." This, however, still leaves open the question whether the July number of the Journal was published earlier or later than the July quarterly number of the Natural History Review of the same year. On this point neither the publishers of the Review nor the present editor of the Journal have been able to supply information. But the Library of the British Museum at Bloomsbury gives, as it seems to me, a fairly satisfactory clue. The number of the 'Natural History Review' for July 1858 is there on the last page of the number, p. 263, stamped "16 JY 58." Now, Bate's paper in the Journal is followed on p. 105 by "Return of Donations to the Royal Dublin Society, to July, 1858," so that the material for the number was not even complete till the beginning of July, and its issue within a fortnight of that completion would surely in those days have seemed needless to the editors and impossible to the printers. Incidentally it may be observed that Kinahan refers to Bate's paper as appearing in the second volume of the Journal without giving any page number, as he would naturally have done, had such a number been already available. We also find that Kinahan uses the spelling *Vaunthompsonia* in a Report to the

British Association at Leeds in September, 1858, on p. 266 of the General Report, which was no doubt not effectively published till the following year, when he might have corrected an unintended error.

My thanks are due to Dr. Calman for his having entrusted me with the evidence that Bate's *Vauntompsonia* was published at some time in the third quarter of 1858. Nevertheless we have Bate's own clear statement that the genus was described by him in the 'Natural History Review.' He could just as well have referred to the Journal, if that had priority, and it would have given him the best possible opportunity of vindicating his mode of spelling the generic name against Kinahan's. Kinahan was on terms of intimacy with Spence Bate, as letters in my possession show. He was also interested in the reputation of Vaughan Thompson. It may well be that he thought his friend Bate was taking too much of a liberty with the deceased author in misspelling both his christian and his surname. To remedy this, we may suppose, he himself took the liberty of making a change in the still unpublished name of Bate's genus, against which I cannot find that Spence Bate ever uttered or printed a word of expostulation.

Whatever may be the result of the particular controversy, time will not have been wasted over it, if it helps to bring about a more general adoption of the practice in scientific literature of printing on each separate publication the exact date of issue.

IV.

Phyllody in *Trifolium*. By MAY RATHBONE, F.L.S.

[Read 21st March, 1912.]

A specimen of *Trifolium repens* showing phyllody of the carpels, was gathered in a hayfield, Cheshire, in the summer of 1912.

The flowers are of two forms, both occurring on the same plant, but in different heads. In one form in place of the carpel the axis of the flower is prolonged into a petiole with well-developed stipules and bearing only one leaflet. The other parts of the flower are normal, except that the calyx teeth are, I think, a little longer and broader than usual.

The other form bears a trifoliate leaf instead of the carpel and, in the flower of this type which was dissected, no stipules were found. The stamens, corolla, and calyx were normal.

The season of 1912 was a particularly dry one, and the plant showed no signs of disease or injury.

References.

- Dr. Masters, "Vegetable Teratology," pp. 276 & 279, 1869.
 M. Germain de Saint-Pierre, Bull. Soc. Bot. France, 1856, vol. iii. p. 477.
 Dr. Penzig, "Pflanzen-Teratologie," vol. i. 1890.

V.

The Palæogeographical Relations of Antarctica. By CHARLES HEDLEY, F.L.S., Assistant Curator of the Australian Museum, Sydney, New South Wales.

[Read 6th June, 1912.]

1. INTRODUCTION.

TESTIMONY in support of alteration in temperature and contour of Tertiary Antarctica is almost wholly based on a comparison of the living fauna and flora of surrounding countries. While biologists in general, led by Wallace, Sclater, and Hutton, opposed the idea of an extended and habitable Antarctica, geographers hesitated to adopt a hypothesis the arguments for which lay in a foreign field. But of late years most of those engaged in its discussion have been supporters of extension, so that the theory has advanced from the position of a disparaged heresy to that of an established view.

Accustomed to rely on biological evidence, in the form of palæontology, for important and far-reaching generalisations, geology may now accept from biology this theory of former Antarctic extension. Thereby is acquired a correlation of climate, of time, and of continental change, while incidentally a new light is thrown on the question of the permanence of ocean basins.

It seemed nothing unusual to find a similar fauna and flora, even to the extent of a large proportion of identical species, on the subantarctic islands all round the world. But collectors working in south temperate and even in south tropical zones were surprised to find related species and genera in opposite hemispheres. This correspondence is more pronounced in primitive groups and grows clearer southwards.

First, it was realised when the famous botanist Sir J. D. Hooker pointed to the distribution of the southern pines as indicating a common origin (Hooker, 'London Journal of Botany,' iv. 1845, p. 137).

The relations of a southern fauna linking Australasia to South America were sketched firm and clear by a master hand in Professor Huxley's essay on the classification and distribution of the gallinaceous birds (Huxley, Proc. Zool. Soc. 1868, p. 294).

According to Ortman, first Rüttimeyer definitely proposed radiation from Antarctica as the solution of the problem (Rüttimeyer, 'Ueber die Herkunft unserer Thierwelt,' 1867, p. 15).

Our knowledge of this subject was much advanced by Dr. H. O. Forbes (Forbes, Roy. Geogr. Soc. Suppl. Papers, iii. 1893). Starting from the fossil avifauna of the Chatham Islands, he reviewed the community of southern faunas and interpreted it by

antarctic distribution. As the means of dispersal he mapped a vast continent stretching continuously from Madagascar to South America and Fiji during the "northern glacial epoch."

It was suggested by the present writer that a far smaller area of continental land, of an earlier date and of unstable form, was indicated by its surviving refugees (Hedley, *Proc. Roy. Soc. N. S. Wales*, xxix. 1896, p. 278); and that the last Antarctic phase as reflected by these might be expressed in arms reaching on one side to Tasmania, on the other to Cape Horn, while previous phases may have been represented by other rays extending to New Zealand, Madagascar, Ceylon, and perhaps South Africa.

A study of terrestrial and fluviatile mollusca induced Ancey to subscribe to these suggestions (C. F. Ancey, *Journ. de Conch.* xlix. 1901, p. 12).

Dr. Ortmann, while investigating the South American Tertiary Invertebrates, accepted my amendments to Forbes's proposition. To a clear exposition of the subject he added a map and bibliography ('Report Princeton University-Expedition to Patagonia,' iv. pt. 2, 1902, pp. 310-324).

The distribution of southern earthworms was discussed by Prof. W. B. Benham (*Proc. Austr. Assoc. Adv. Sci.* 1902, pp. 319-343). In his opinion the Acanthodrilids, a primitive group, originated in New Zealand and spread by way of Antarctica to South America. He emphasised the fact that the union they indicated between Antarctica and New Zealand was not synchronous with the Australian connection.

Examining the mammalian fauna A. Gaudry considered that unless Tertiary Patagonia was united to Antarctica its palæontological history would be incomprehensible (*Compt. Rend.* vol. cxli. 1905, p. 806).

From a study of the freshwater crustacea of Tasmania, Mr. Geoffrey Smith concludes that certain elements of this fauna "reached their present range by means of an Antarctic connection between the southernmost projections of Australia, South America, and New Zealand" (*Trans. Linn. Soc. Lond. Ser. 2. Zool.* ix. 1909, p. 67). His analysis revealed the presence in Tasmania of another element which he derived from the northern hemisphere and which he supposed to have travelled down the Andean chain and crossed to Australasia by the Antarctic route.

Summing up a biological examination of the southern islands of New Zealand, Prof. C. Chilton concludes: "The evidence pointing to former extensions of land from the Antarctic continent northward, and to the warm climate that was enjoyed by this continent in early Tertiary times, seems to offer a fairly satisfactory explanation of the facts before us" ('Subantarctic Islands of New Zealand,' ii. 1909, p. 467). A full bibliography is included in this article.

Finally, Osborn describes the hypothetical reconstruction of Antarctica as "one of the greatest triumphs of recent biological investigation" ('The Age of Mammals,' 1910, p. 75).*

2. ARGUMENT.

The distribution records of recent and fossil species upon which the generalisations of the foregoing authors depend have never been denied. Indeed, they continue to increase with the progress of science.

To other, and usually earlier, authors these views presented two insuperable difficulties. One is the extreme change in climate which formerly permitted temperate and subtropical animals and plants to exist where cold is now so intense. The other is the demand for the existence of Tertiary land where an ocean now extends so broad and deep as that between Antarctica and Tasmania or New Zealand.

To evade these difficulties and yet explain existing distribution the following three alternatives have been advanced.

I.

That decadent groups were expelled from their original seats by more vigorous competitors; retreating from a northern centre to the ends of the earth, such groups divided into fugitive parties which converged as southern lands approached the pole. Or discontinuous distribution in southern continents were simply considered remnants of a former universal distribution (Wallace, 'The Geographical Distribution of Animals,' i. 1876, p. 398; Pfeffer, Zool. Jahrb. Suppl. viii. 1905, pp. 407-442).

But whereas, under the circumstances postulated, the northern wanderers would be expected to diminish and to vary as they receded, the southern forms in question became more alike and more numerous proceeding south. Thus radiation rather than convergence is indicated.

II.

That birds, winds, or circumpolar currents, by a process of picking up and setting down passengers from the continents or

* While this article was in the press, there reached me an important memoir by Dr. Pilsbry on "The Non-Marine Mollusca of Patagonia" (Rep. Princeton Univ. Exped. Patagonia, iii. 1912, pt. v. pp. 513-633). My friend considers Antarctica rather as a road for migration, especially an American exit, than as a centre of evolution. He takes exception to my derivation of Australian *Acavidae* from Antarctica, and suggests that the group arose in Gondwana Land. On reconsideration I would still maintain that the south-eastwardly increasing distribution of Australian *Acavidae* indicates their immediate Antarctic origin. But previous to an Antarctic sojourn the group may have been Gondwana bred. This memoir heightens the resemblance between east and west. *Gundlachia*, *Diplodon*, and *Radiodiscus* are common, *Petterdiana* scarcely differs from *Littoridina*, and *Potamolthis* appears to have Tasmanian relatives.

islands by the way, established a uniformity of fauna and flora. Thus Dr. Michaelson writes (Journ. West. Aust. Nat. Hist. Soc. v., July 1908, p. 13): "There is no need for the supposition of an ancient great Antarctic continent which connected Australia and South America as some scientific men still suppose. Certain littoral Oligochæta consisting of euryhaline forms, for which the salt sea is no barrier, can be transported by the west wind drift over the stations on the different islands lying between one continent and another."

The flora of the circumantarctic islands, as instanced by Kerguelen, was thought by W. Schimper to have been conveyed by sea birds and ocean drift (Schimper, Wissenschaft. Ergebn. Valdivia, ii. 1905, p. 75). Although this might apply to species which recur through several archipelagoes, such would not explain the presence of endemic plants and on Kerguelen the occurrence of an endemic snail, *Amphidoxa hookeri*.

Such transport accounts only for a wide range of individual species capable of air or water carriage. It has doubtless been a small but real factor in distribution. But it does not account for the existence of related and representative species, for the subtropical element, or for the species incapable of such conveyance. Prof. W. B. Benham raises the objection that a species might drift yet never land:—"When I stood at the top of the sheer cliffs, some 500 ft. to 1000 ft. in height, which form the whole of the west coast of Auckland Island, and saw the tremendous breakers which even in moderately calm weather dash with incredible force against the rocks, I was more than ever convinced that the 'west-wind drift' cannot account for the transference of Oligochæta from the various land surfaces of this subantarctic region" (Benham, 'Subantarctic Islands of New Zealand,' i. 1909, p. 254).

III.

That a trans-Pacific continent conveyed to New Zealand, Australia, and South America a common stock otherwise recognised as the Antarctic element (Hutton, Proc. Linn. Soc. N. S. Wales, xxi. 1896, p. 36; Baur, 'American Naturalist,' xxxi. 1897, p. 661).

This alternative seems the weakest. Had a trans-Pacific bridge really disseminated the species under discussion, then they should be best developed in the central remaining portion (for instance, in Tahiti or Samoa) and least at the extremity (as in Chili or Tasmania). Actually the reverse is the case: South America is the most closely associated with Tasmania, then New Zealand is less so, and the Mid-Pacific islands not at all.

Those who consider the demand for land between Tasmania and Antarctica as exorbitant are not consistent in asking so much larger a grant in the Pacific.

Another difficulty is why that South American contingent which flooded Tertiary Antarctica, and then Australia, failed to include such characteristic South American fauna as the humming-

birds, platyrrhine monkeys, hystricomorph rodents, edentates, or notoungulates. Dr. von Jhering explains (Trans. N.Z. Inst. xxiv. 1891, p. 431; and N. Jahrb. f. Mineralogie, &c. Beil.-Bd. xxxii. 1911, p. 176, pl. v.) that two former subcontinents, of late mesozoic or early tertiary age, are now fused in the present South America. Before the rise of the Andes these were separated from each other by a broad sea and maintained distinct fauna and flora. The southern tract, which he calls "Archiplatea," comprised what is now Chili, Argentina, and Southern Brazil. The northern area, called "Archiguyana," embraced Northern Brazil, Venezuela, and Guiana.

It was from Archiplatea that the last phase of Antarctica had its American derivatives, and that at a time when many forms now regarded as typically South American had not yet reached Archiplatea. Not until after Antarctica was released from Archiplatea did the latter join Archiguyana, and then the southern fauna suffered the usual fate from the incursion of the more highly organised northern types.

3. THE AUSTRAL FAUNA AND FLORA.

More space than is here available would be required to enumerate the Antarctic refugees in austral lands. A few of the more striking instances are now selected.

Recent marsupials are restricted to Australasia and to the Americas, the monotremes to the former. It seems to have been assumed generally that marsupials necessarily had a European origin and travelled across Siberia to North America. A shorter connection between Western Europe and South America by way of Archhelenis is at any rate worth debate. Had the entry to Australia been by the Malay Archipelago, as opponents of the Antarctic hypothesis advance, then stragglers by the way should have lingered in the East Indies. In Australasia marsupials and monotremes are least developed in the north; proceeding southwards more groups successively appear till ultimately Tasmania has, as Professor Spencer expressed it, "a condensation of most that is noteworthy in the Australian region" (Spencer, Proc. Austr. Assoc. Adv. Sci. 1892, p. 106). Indeed, the most convincing proof of the Antarctic theory is the fact that in Australasia the South American affinities regularly increase as Tasmania is approached and there attain their maximum. Those who deny marsupial migration across Antarctica are obliged to assume that the Thylacinidæ were independently evolved in each hemisphere. That Tasmania was the point of entry is supported by the discovery in Tasmania of the earliest fossil Australian marsupial. This, *Wyngardia bassiana*, is apparently one of the Phalangeridæ, but the unique example is too imperfect for positive identification (Spencer, Proc. Zool. Soc. 1900, p. 776).

Local geologists class the stratum in which it occurred as Eocene, but English and American geologists are less disposed to grant these beds such antiquity.

If marsupials had not been available, the case could have been made as clear from herpetological evidence. And, indeed, were the vertebrata disregarded, the hypothesis could still be as well established from the invertebrata or the plants.

Among the reptiles, fifty genera of the Iguanidæ are known, all of which are confined to the New World, chiefly South America, except one genus in Fiji and two in Madagascar. Australian snakes are divisible into the venomous and the non-venomous groups. All the venomous are of the family Elapidæ, related to South American types; they focus in Tasmania, where non-venomous snakes are absent. The non-venomous snakes are of Asiatic or Papuan affinity, and focus in North Queensland. The majority of Australian frogs are also akin to South American forms.

A family of large snails, conspicuous for the size and beauty of the shell and distinct in structural features, called by Dr. Pilsbry the *Macroogona*, has the following distribution:—In South America, chiefly tropical, *Macrocyclus* 1 species, *Strophochilus* 51 species, and *Gonyostomus* 5 species; in Madagascar, *Ampelita* 54 species and *Helicophanta* 16 species; in the Seychelles, *Stylodonta* 2 species; in Ceylon, *Acavus* 7 species; in the Moluccas, *Pyrochilus* 4 species; in Tasmania, *Anoglypta* 1 species and *Caryodes* 1 species; in Eastern Australia, *Pedinogyra* 1 species and *Panda* 4 species. The Chilian *Macrocyclus* and the Queensland *Pedinogyra* by shell characters pair together, while *Helicophanta* is a match for *Panda*. The absence of this family from New Zealand, its preponderance of species in Madagascar, of genera in Tasmania with Australia, and its development in the tropics are remarkable characters of this old austral group.

The snail family Bulimulidæ is characteristic of South America, beyond which two genera stray into the West Indies and North America, and two others, *Bothriembryon* and *Placostylus*, occur in Australasia. The first ranges from Tasmania to West Australia, and forms an exception to Antarctic rule by having its distribution centre in the latter. Indeed, *Bothriembryon* and the fluviatile crustacean *Cheraps* raise a suspicion that West Australia had direct relations with Antarctica, prior to and independent of the Tasmanian Isthmus. *Placostylus* extends from New Zealand to Fiji and New Guinea, "giving testimony," as Pilsbry remarks, "to the former existence of an Antarctic land connecting the austral continents of the two hemispheres" (Man. Conch., Index, vols. x.-xiv. 1902, p. ix).

The Buprestidæ, a family of large and handsome beetles, exhibit a striking affinity between Australia and South America. So

much so that, opposed as Wallace was to the Antarctic connection, he here conceded that some exchange between the two areas was required. He thought that it took the form of larvæ in floating timber drifting round the antarctic seas in a warm period.

Among early Tertiary vegetation brought from Seymour Island in the Antarctic by Dr. Nordenskjöld's expedition, Dusén has recognised a species of *Fagus* and an *Araucaria* like *A. brasiliensis* (Schwedische Sudpolar. Exp., Bd. iii. Lief 3, 1908). In the light of this discovery the range of the living species of these genera acquires an importance for the student of the Antarctic hypothesis. The distribution of the beech trees is a particularly interesting one, for on the principle of Antarctic extension it is simple and intelligible, but without it is complicated and inexplicable.

This genus *Fagus*, sensu latu, has two representatives in Europe, one in North America, and several in China and Japan. But in South America there are eleven, in New Zealand seven, and in Tasmania with Australia three. The northern forms are deciduous, but with one or two exceptions the southern are evergreen. The genus being a natural one is certainly not of polyphyletic origin, and the question before us is, from what centre of migration has it spread? Did the southern species radiate from the south or converge from the north? It is a strong argument for a southern origin that the bulk of the species are southern. Again, the evergreen state is primitive, the deciduous derived, and this indicates that the northerners are offshoots from an evergreen stock. Thirdly, the southern species more closely resemble each other than any northern does any southern form. Even, as Mr. Rodway (Proc. Austr. Assoc. Adv. Sci. 1912) points out, the same parasite afflicts Tasmanian and South American trees. This agrees better with radiation from the south than with convergence from the north.

Another aspect of Antarctic distribution is presented by the genus *Araucaria*. None of the fifteen existing species reach the northern hemisphere, so the complication of a boreal factor is absent. It is chiefly subtropical and characterises a zone external to that of *Fagus*. In South America there are three species, in New Caledonia eight, in Norfolk Island one, in New Guinea one, and in Australia two. The latter pair are unlike each other, but one, *A. bidwilli*, from Queensland, stands very close to the Chilean *A. imbricata*. This indicates that the genus had already differentiated almost to its present extreme before the migration route between Australia and South America had closed. The large and heavy seeds of these trees possess no floating power and are unfitted for dispersal by birds. As Dr. Guppy remarks of the Fijian Kauri pine, "they may well be cited in support of any continental hypothesis" (Guppy, 'Naturalist in the Pacific,' ii. 1906, p. 301).

The preponderance of *Araucaria* in the Pacific is enforced by a

related genus *Agathis*. If statistics carry a meaning, *Fagus* would seem to have come to Australasia from America, while *Araucaria* made the reverse journey.

The remarkable and well known genus *Fuchsia* includes sixty-nine species. Four of these are natives of New Zealand, the rest inhabit South America, Mexico, and the West Indies. These figures are almost exactly reversed for the shrubby evergreen *Veronicas*, plants conspicuous in any New Zealand landscape, totally absent from Australia or Tasmania, and represented by a few stragglers in South America and Fuegia.

4. DEDUCTIONS.

If it be resolved that the community of austral life is explicable only by former radiation along land-routes from the south polar regions, we reach a position to probe deeper into the intricacies of the problem.

In the scheme propounded by Dr. H. O. Forbes, the austral forms inhabited one vast continent, nearly a third of the southern hemisphere, at the same (? Pleistocene) time. But an analysis of the fauna in question shows that some groups avoid Tasmania and others avoid New Zealand. Clearly the Antarctica that supplied Australia with an abundant fauna of marsupials, monotremes, snakes, frogs, and so on, was not in touch with New Zealand, where these animals are conspicuously absent. Benham has emphasised the fact that the Acanthrodriids, Antarctic earthworms, failed to reach Tasmania. When they, the fuschias and other associates, spread backwards and forwards from New Zealand to South America, it is equally clear that the road to Tasmania was barred to them. Iredale remarks (Proc. Malac. Soc. ix. 1910, p. 160) that the Antarctic element in the New Zealand Polyplacophora, a marine molluscan group, is distinct from that which reached Tasmania from the south. The differences are both positive and negative, and are not due merely to the more southern latitude of New Zealand preserving a larger proportion of cold types. When circumstances allowed Iguanidæ to wander from South America in two genera to Madagascar and in another to Fiji, the Australian road was apparently closed to them.

It becomes increasingly apparent that the Antarctic source of austral life was not simple but compound. This complexity has probably been the chief hindrance to its recognition. The problem before us is:—Was the complexity that of time or space, or both?

Shall we suppose, for instance, that at the close of a glacial period an Antarctic continent bare of life received a fauna and flora from one neighbour, then developed and transmitted it to another? That a subsequent glaciation swept all life away from the polar area? That a warm interglacial period succeeded when another transfer, but between different neighbours, took place?

So that the fauna of New Zealand might represent the life of one interglacial antarctic phase and that of Australia another.

Or shall we consider that Tertiary Antarctica was an archipelago, the islands of which carried such different fauna and flora that emigrants from one quarter differed from those of another. It is not yet known whether the area between King Edward VII. Land and Graham Land is a lobe of the continent or an archipelago, or an independent island (Darwin, Proc. Roy. Soc. A. vol. lxxxiv, 1910, p. 420; and Mawson, Geogr. Journ. xxxvii. 1911, map, p. 613). In the latter case it is possible that King Edward VII. Land may have joined New Zealand, while Tasmania was separately linked to South Victoria Land. Under these circumstances New Zealand and Tasmania may have simultaneously imported an Antarctic and yet a different fauna and flora.

Or both conditions of interglacial succession and insularity may have combined in the past to produce present effects.

Prof. H. Pilsbry has shown (Proc. Acad. Nat. Sci. Philad. 1900, p. 568) that the land molluscan faunas of the Marquesas, Hawaii, and Society Islands are closely related, and that though of primitive type they are harmonic such as befits continental land, not a drift selection such as oceanic islands have. He proposes them as witness to the existence of a Palæozoic or early Mesozoic land mass. The tree-lobelias also testify to the antiquity and association of these distant Pacific archipelagoes (Guppy, 'A Naturalist in the Pacific,' ii. 1906, p. 250). Their relations are with the alpine floras of South America and Equatorial Africa. A third of the mountain flora of Hawaii is derived from high southern latitudes. It is now suggested that these primitive continental plants and animals reflect a meridional Pacific land-ray, the first visible vestige of Antarctic extension, as Tasmania was the last. To carry a cold flora across the Equator the land must have been lofty and continuous. In such a range some might see the rib of a former tetrahedral world.

As the Eocene was both a warm period and a time when land was largely developed in the Patagonian area, it is likely that the Archiplatan fauna then or earlier entered Antarctica. If the Tasmanian fossil *Wynyardia* is rightly dated Eocene, then during that age some at least of the American migrants reached Australia.

Whereas New Zealand in its relation with South America, *via* Antarctica, appears both as a giver and a receiver, Australia, on the contrary, seems to have made no return to South America, but to have received all and given nothing.* No Eucalypts, for instance, crossed from Tasmania to Patagonia. One explanation

* Ortmann (Proc. Am. Philos. Soc. xli. 1902, p. 340) considers that the freshwater crustacea Parastacidae spread from Australia into Antarctica and thence into Chili. But the distribution of this group in Australia as detailed by G. Smith (Proc. Zool. Soc. 1912, p. 149) appears to me to be that of immigrants from an east and west base respectively.

may be that Australia was then too poor to afford emigrants. Another and more probable explanation is that Antarctica having received a fauna and flora from Archiplata was severed from it before joining Australia. Thus a stream of migration would be forced forward and checked backwards.

The austral fauna and flora appears extending in successive zones from the far south to the tropics. In New Zealand the warmth-loving plants and animals, such as the Kauri pine (a relation of *Araucaria*) and *Placostylus* snail, have been thrust to a northern refuge, while diminished temperature has probably exterminated others. The *Araucaria* and iguanas, the freshwater fish *Osteoglossum*, are examples of tropical austral forms of which a long list could be compiled.

It is unlikely that the Antarctica that bore this tropical and subtropical assembly reached much more broadly to the tropics than does the present continent. Had it done so, more traces would have been left of such extension in the South Sea Islands on the one side or in South Africa on the other.

But if the subtropical flora and fauna had in the Tertiary extended unbroken across the pole from Fuegia to Tasmania, what then became of the ancestors of the present subantarctic and south alpine life? Why were not these frigid forms driven from off the face of the earth when the heart of the Antarctic itself enjoyed a genial climate?

The discovery by Sir E. Shackleton of a plateau 10,000 feet high near the south pole, suggests a solution of the difficulty. If such a plateau existed when the climate was at its warmest, then the tropical migrants could have found a congenial climate on the coast, while the ancestors of the Kosciusko and Kerguelen plants and animals took refuge on the plateau heights. The inference is that such a plateau did then exist.

If the land-connection between the Antarctic and Tasmania had broken down during the warmest period of the interglacial phase, it would have isolated the flora and fauna at a time when the cold elements were gathered together on the central plateau heights, while the temperate and subtropical elements possessed the Antarctic periphery. In that case the cold forms would have had no opportunity to escape to the alpine stations of New Zealand or Australia, or to occupy the subantarctic islands.

The conclusion is therefore drawn that the land link was maintained during the period of refrigeration, and that from the Antarctic focus first the subtropical, then the temperate, lastly the alpine forms were expelled, each to gain a fresh footing in lower latitudes.

Possibly associated with the formation of great ice masses, a paroxysm of diastrophic energy ensued. This, which perhaps has not yet subsided, effected the destruction of the antarctic bridge, and to it may be due the recent disarticulation of the Dominion

of New Zealand and the severance of Tasmania from its parent continent.

In the long perspective of past time Antarctica appears to fade and form like a summer cloud, now extending a limb, now shedding it, now resolving into a continent, now dissolving into an archipelago. At present it lies dead and cold under its white winding-sheet of snow. By the light of the magician's lamp we watch the summer of the cycles dawn. The glow of life returns, the ice mask melts, green spreads a mantle. At last a vision comes of rippling brooks, of singing birds, of blossoming flowers, and of forest glades in the heart of Antarctica.

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4to. Cambridge, 1898-1902.

Part I.

1. WILLEY (A.). Anatomy and Development of *Peripatus novæ-britanniæ*. Pp. 1-53; with 4 plates and 7 figures in the text. 1898.
2. MAYER (PAUL). *Metaprotella sandalensis*, n. sp. [Caprellidæ]. Pp. 53-57; with 6 figures in the text. 1898.
3. BOULENGER (G. A.). Little-known Sea-Snake from the South Pacific. Pp. 57-59; with Plate 5. 1898.
4. POCOCK (R. I.). Centipedes and Millipedes. Pp. 59-75; with Plate 6. 1898.
5. SHARP (D.). Phasmidæ with notes on the Eggs. Pp. 75-95; Plates 7-9. 1898.
6. POCOCK (R. I.). Scorpions, Pedipalpi and Spiders. Pp. 95-120; Plates 10, 11. 1898.

Part II.

7. HICKSON (SYDNEY H.). Millepora. Pp. 121-133; Plates 12-16. 1899.
8. BELL (F. JEFFREY). Echinoderms (other than Holothurians). Pp. 133-141; with figs. on Plate 17 and one figure in the text. 1899.
9. BEDFORD (F. P.). Holothurians. Pp. 141-150; with figs. on Plate 17. 1899.
10. SHIPLEY (ARTHUR E.). Sipunculoidea. Pp. 151-160; with Plate 18. 1899.
11. GARDINER (J. STANLEY). Solitary Corals. Pp. 161-170; Plates 19, 20. 1899.
12. GARDINER (J. STANLEY). Cycloseris. Pp. 171-180; Plates 19, 20. 1899.
13. BEDDARD (FRANK E.). Earthworms. Pp. 181-194; Plate 21. 1899.
14. HILES (ISA L.). Gorgonacea. Pp. 195-206; Plates 22, 23. 1899.

Part III.

15. GADOW (HANS). Orthogenetic variation in shells of Chelonia. Pp. 207-222; Plates 24, 25, and one text-figure. 1899.
16. WILLEY (ARTHUR). Enteropneusta. Pp. 223-334; Plates 26-32, and seven text-figures. 1899.
17. SHIPLEY (ARTHUR E.). Collection of Echiurids. Pp. 335-356; Plate 33. 1899.

Part IV.

18. GARDINER (J. STANLEY). On the Anatomy of a supposed new species of *Cænopsammia* from Lifu. Pp. 357-380; Plate 34. 1900.
19. SHARP (D.). On the Insects from New Britain. Pp. 381-394; Plate 35. 1900.
20. BORRADAILE (L. A.). On the Stomatopoda and Macrura brought by Dr. Willey from the South Seas. Pp. 395-428; Plates 36-39. 1900.
21. COLLINGE (WALTER E.). Report on the Slugs. Pp. 429-438; Plates 40, 41. 1900.

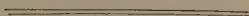
22. PHILIPPS (E. G.). Report on the Polyzoa, &c. Pp. 439-450; Plates 42-43. 1900.
23. THORNELY (LAURA ROSCOE). The Hydroid Zoophytes. Pp. 451-458; Plate 44. 1900.
24. LISTER (J. J.). *Astroclera willeyana*, the type of a new Family of Sponges. Pp. 459-482; Plates 45-48. 1900.
25. PYCRAFT (W. P.). Pterylography of the Megapodii. Pp. 483-492; Plate 49. 1900.
26. HICKSON (SYDNEY J.) and HILES (ISA L.). Stolonifera and Alcyonacea. Pp. 493-508; Plates 50, 51. 1900.
27. ASHWORTH (J. H.). Report on the Xeniidæ. Pp. 509-528; Plates 52, 53. 1900.

Part V.

28. SHIPLEY (ARTHUR E.). Entozoa. Pp. 531-568; Plates 54-56. 1900.
29. PUNNETT (R. C.). South Pacific Nemertines. Pp. 569-584; Plates 57-61. 1900.
30. BORRADAILE (L. A.). Young of the Robber Crab. Pp. 585-590; with figures in the text. 1900.
31. PRATT (EDITH M.). Anatomy of *Neohelia porcellana*, Moseley. Pp. 591-602; Plates 62, 63. 1900.
32. BOULENGER (G. A.). New Blind Snake from Lifu, Loyalty Islands. Pp. 603-604; with figures in the text. 1900.
33. STEBBING (Rev. T. R. R.). Crustacea from the South Seas. Pp. 605-690; Plates 64-74. 1900.

Part VI.

34. WILLEY (ARTHUR). Natural History of the Pearly Nautilus. Pp. 691-830.
 - I. Personal Narrative. With 11 text-figures.
 - II. Special Contribution. Plates 75-83, a map, and fifteen text-figures. 1902.



BENEFACTIONS.

LIST in accordance with *Bye-Laws, Chap. XVII. Sect. 1, of all Donations of the amount or value of Twenty-five pounds and upwards.*

1790.

The Rt. Hon. Sir Joseph Banks, Bt.

Cost of Copper and engraving of the plates of the first volume of Transactions, 20 in number.

The same: Medallion of C. von Linné, by C. F. Inlander.

1796.

The same: a large collection of books.

1800.

Subscription towards the Charter, £295 4s. 6d.

Claudius Stephen Hunter, Esq., F.L.S. (Gratuitous professional services in securing the Charter).

1802.

Dr. Richard Pulteney.

His collections, and £200 Stock.

Aylmer Bourke Lambert, Esq.

Portrait of Henry Seymer.

1804.

The Rt. Hon. Sir Joseph Banks, Bt.

His collection of Insects.

1807.

Richard Anthony Salisbury, Esq.

Portrait of Daniel Solander, by J. Zoffany.

1811.

The Rt. Hon. Sir Joseph Banks, Bt.

His collection of Shells.

Mrs. Pulteney.

Portrait of Dr. R. Pulteney, by S. Beach.

1814.

Joseph Sabine, Esq.

Portrait of C. von Linné, after A. Roslin, reversed. [c. 1853]

Dr. John Sims.

Portrait of Dr. Trew.

1818.

Subscription of £215 6s. for Caley's Zoological Collection.

1819.

The Medical Society of Stockholm.

A medallion of Linnæus in alabaster.

1822.

Bust of Sir Joseph Banks, Bt., by Sir F. Chantrey, R.A.
Subscription of the Fellows.

1825.

The late Natural History Society.

£190, 3½ Stock.

Bust of Sir James Edward Smith, P.L.S., by Sir F. Chantrey,
R.A., by Subscribers.

1829.

Subscription for the purchase of the Linnean and Smithian
Collections, £1593 8s.

1830.

Sir Thomas Grey Cullum, Bt.

£100 Bond given up.

1832.

The Honourable East India Company.

East Indian Herbarium (Wallichian Collection).

1833.

Subscription for Cabinets and mounting the East Indian Herbarium,
£315 14s.

1835.

Subscription portrait of Robert Brown, by H. W. Pickersgill, R.A.

1836.

Subscription portrait of Edward Forster, by Eden Upton Eddis.

Subscription portrait of Archibald Menzies, by E. U. Eddis.

1837.

Subscription portrait of Alexander MacLeay, by Sir Thomas
Lawrence, P.R.A.

1838.

Collections and Correspondence of Nathaniel John Winch.

Portrait of Dr. Nathaniel Wallich, by John Lucas, presented by
Mrs. Smith, of Hull.

1839.

Subscription portrait of William Yarrell, by Mrs. Carpenter.

1842.

David Don: herbarium of woods and fruits.

Archibald Menzies: bequest of £100, subject to legacy duty.

Portrait of John Ebenezer Bicheno, by E. U. Eddis, presented by
Mr. Bicheno.

1843.

Subscription in aid of the funds of the Society, £994 3s.

Subscription portrait of Sir William Jackson Hooker, by S. Gambardella.

1845.

Microscope presented by Subscribers.

1846.

Joseph Janson: £100 legacy, free of duty, and two cabinets.

1847.

[Bequest of £200 in trust, by Edward Rudge; declined for reasons set forth in Proceedings, i. pp. 315-317.]

1849.

Portrait of Sir J. Banks, Bt., by T. Phillips, R.A., presented by Capt. Sir E. Home, Bt., R.N.

1850.

Subscription portrait of the Rt. Rev. Edward Stanley, D.D., Bishop of Norwich, by J. H. Maguire.

1853.

Portrait of Carl von Linné, after A. Roslin, by L. Pasch, presented by Robert Brown.

Pastel portrait of A. B. Lambert, by John Russell, presented by Robert Brown.

1854.

Professor Thomas Bell, £105.

1857.

Subscription portrait of Prof. T. Bell, P.L.S., by H. W. Pickersgill, R.A.

Thomas Corbyn Janson: two cabinets to hold the collection of fruits and seeds.

Pleasance, Lady Smith: Correspondence of Sir J. E. Smith, in 19 volumes.

1858.

Subscription portrait of Nathaniel Bagshaw Ward, by J. P. Knight.

Richard Horsman Solly, £90 after payment of Legacy Duty.

Subscription for removal to Burlington House, £1108 15s.

Biography of Carl von Linné, and letters to Bishop Menander, presented by Miss Wray.

Dr. Horsfield's Javan plants, presented by the Court of Directors of the Hon. East India Company.

Dr. Ferdinand von Mueller's Australian and Tasmanian plants, including many types.

1859.

Books from the library of Robert Brown, presented by J. J. Bennett, Sec.L.S.

Robert Brown: bequest of two bonds given up, £200.

1861.

Subscription bust of Robert Brown, by Peter Slater.

Collection of birds' eggs, bequeathed by John Drew Salmon, F.L.S.

1862.

The Linnean Club: presentation bust of Prof. T. Bell, by P. Slater.

1863.

Subscription portrait of John Joseph Bennett, by E. U. Eddis.

1864.

Beriah Botfield, Esq.: Legacy, £40 less Duty.

1865.

Executors of Sir J. W. Hooker, £100.

George Bentham, Esq.: cost of 10 plates for his "Tropical Leguminosæ," Trans. vol. xxv.

1866.

Dr. Friedrich Welwitsch: Illustrations of his 'Sertum Angolense,' £130.

1867.

George Bentham, Esq.: General Index to Transactions, vols. i.-xxv.
Royal Society: Grant in aid of G. S. Brady on British Ostracoda, £80.

1869.

Carved rhinoceros horn from Lady Smith, formerly in the possession of Carl von Linné.

1874.

Subscription portrait of George Bentham, by Lowes Dickinson.
George Bentham, Esq., for expenditure on Library, £50.

1875.

Legacy from James Yates, £50 free of Duty.
" " Daniel Hanbury, £100 less Duty.

1876.

Legacy of the late Thomas Corbyn Janson, £200.

" " " Charles Lambert, £500.

George Bentham, Esq.: General Index to Transactions, vols. xxvi.-xxx.

1878.

Subscription portrait of John Claudius Loudon, by J. Linnell.

Subscription portrait of Rev. Miles Joseph Berkeley, by James Peel.

1879.

Rev. George Henslow and Sir J. D. Hooker: Contribution to illustrations, £35.

1880.

The Secretary of State for India in Council: cost of setting up Dr. Aitchison's paper, £36.

1881.

George Bentham, Esq., special donation, £25.

The same: towards Richard Kippist's pension, £50.

Portrait of Dr. St. George Jackson Mivart, by Miss Solomon; presented by Mrs. Mivart.

1882.

Executors of the late Frederick Currey: a large selection of books.
Subscription portrait of Charles Robert Darwin, by Hon. John Collier.

The Secretary of State for India in Council: Grant for publication of Dr. Aitchison's second paper on the Flora of the Kurru Valley, £60.

1883.

Sir John Lubbock, Bt. (afterwards Lord Avebury).

Portrait of Carl von Linné, ascribed to M. Hallman.

Philip Henry Gosse, Esq.: towards cost of illustrating his paper, £25.

Royal Society: Grant in aid of Mr. P. H. Gosse's paper, £50.

Sophia Grover, Harriet Grover, Emily Grover, and Charles Ehret Grover: 11 letters from Carl von Linné to G. D. Ehret.

1885.

Executors of the late George Bentham, £567 11s. 2d.

Subscription portrait of George Busk, by his daughter Marian Busk.

1886.

A large selection of books from the library of the late Dr. Spencer Thomas Cobbold (a bequest for a medal was declined).

Sir George MacLeay, Bt.: MSS. of Alexander MacLeay and portrait of Rev. William Kirby.

1887.

William Davidson, Esq.: 1st and 2nd instalments of grant in aid of publication, £50.

Francis Blackwell Forbes, Esq., in aid of Chinese Flora, £25.

1888.

The Secretary of State for India in Council: Grant in aid of publication of results of the Afghan Boundary Delimitation Expedition, £150.

Dr. J. E. T. Aitchison, towards the same, £25.

Trustees of the Indian Museum: Mergui Archipelago report, for publication in Journal, £135.

Dr. John Anderson, for the same, £60.

Wm. Davidson, Esq.: 3rd and last instalment, £25.

Sir Joseph Hooker: (1) Series of medals formerly in possession of George Bentham; (2) Gold watch, key, and two seals belonging to Robert Brown.

1889.

Bronze copy of model for Statue of C. von Linné, by J. F. Kjellberg ;
presented by Frank Crisp, Esq.

1890.

The Secretary of State for India in Council : Grant for Delimitation
Expedition report, £200.

Oak table for Meeting Room, presented by Frank Crisp, Esq.

Subscription portrait of Sir Joseph Dalton Hooker, K.C.S.I., by
Hubert Herkomer, R.A.

Executors of the late John Ball, Esq. : a large selection of books.

An anonymous donor, £30.

Colonel Sir Henry Collett, K.C.B., towards the publication of his
Shan States collections, £50.

1891.

Subscription portrait of Sir John Lubbock, Bt. [Lord Avebury]
by Leslie Ward.

George Frederick Scott Elliot, Esq., towards cost of his Madagascar
paper, £60.

1892.

Dr. Richard Charles Alexander Prior : for projection lantern, £50.

1893.

The Executors of Lord Arthur Russell : his collection of portraits
of naturalists.

Electric light installation : cost borne by Frank Crisp, Esq.

1894.

Algernon Peckover, Esq. : Legacy, £100 free of Duty.

Miss Emma Swan : " Westwood Fund," £250.

1896.

Clock and supports in Meeting Room, presented by Frank Crisp,
Esq.

1897.

William Carruthers, Esq. : Collection of engravings and photo-
graphs of portraits of Carl von Linné.

Royal Society : Grant towards publication of paper by the late
John Ball, £60.

Subscription portrait of Professor George James Allman, by
Marian Busk.

1898.

Sir John Lubbock, Bt. : Contribution towards his paper on
Stipules, £43 14s. 9d.

Royal Society : Contribution towards F. J. Cole's paper, £50.

" " " " Murray & Blackman's paper,
£80.

" " " " Elliot Smith's paper, £50.

" " " " Forsyth Major's paper, £50.

1899.

A. C. Harmsworth, Esq. [Lord Northcliffe] : Contribution towards cost of plates, £43.

Royal Society : Contribution towards Mr. R. T. Günther's paper on Lake Urmi, £50.

1901.

Hon. Charles Ellis, Hon. Walter Rothschild, and the Bentham Trustees : The Correspondence of William Swainson.

Royal Society : Contribution towards Mr. F. Chapman's paper on Funafuti Foraminifera, £50.

Prof. E. Ray Lankester : Contribution towards illustration, £30 5s. Portrait of Dr. St. G. J. Mivart, presented by Mrs. Mivart.

1903.

Royal Society : Contribution toward Dr. Elliot Smith's paper, £50. Legacy from the late Dr. R. C. A. Prior, £100 free of duty.

Mrs. Sladen : Posthumous Portrait of the late Walter Percy Sladen, by H. T. Wells, R.A.

B. Arthur Bensley, Esq. : Contribution to his paper, £44.

1904.

Royal Society : Grant in aid of third volume of the Chinese Flora, £120.

Supplementary Royal Charter : cost borne by Frank Crisp, Esq. (afterwards Sir Frank Crisp).

1905.

Royal Society : First grant in aid of Dr. G. H. Fowler's 'Biscayan Plankton,' £50.

Executors of the late G. B. Buckton, Esq. : Contribution for colouring plates of his paper, £26.

1906.

Royal Society : Second grant towards 'Biscayan Plankton,' £50.

Subscription portrait of Prof. S. H. Vines, by Hon. John Collier.

Royal Swedish Academy of Science : Copies of portraits of C. von Linné, after Per Krafft the elder, and A. Roslin, both by Jean Haagen.

1907.

Royal University of Uppsala : Copy by Jean Haagen of portrait of C. v. Linné, by J. H. Scheffel (1739).

Royal Society : Third and final grant towards 'Biscayan Plankton,' £50.

The Trustees of the Percy Sladen Memorial Fund : First grant towards publication of Mr. Stanley Gardiner's Researches in the Indian Ocean in H.M.S. 'Sealark,' £200.

1908.

Prof. Gustaf Retzius: Plaster cast of bust of Carl von Linné, modelled by Walther Runeberg from the portrait by Scheffel (1739) at Linnés Hammarby; the bronze original is for the façade of the new building for the Royal Academy of Science, Stockholm.

Miss Sarah Marianne Silver, F.L.S.: Cabinet formerly belonging to Mr. S. W. Silver, F.L.S.

1909.

The Trustees of the Percy Sladen Memorial Fund: Second grant towards publication of Mr. Stanley Gardiner's *Researches in the Indian Ocean* in H.M.S. 'Sealark,' £200.

Prof. James William Helenus Trail, F.R.S., F.L.S.: Gift of £100 in Trust, to encourage Research on the Nature of Proto-plasm.

1910.

Royal Society: Grant towards Dr. G. H. Fowler's paper on Biscayan Ostracoda, £50.

Sir Joseph Hooker: Gold watch-chain worn by Robert Brown, and seal with portrait of Carl von Linné by Tassie.

Prof. J. S. Gardiner: Payment in aid of illustrations, £35 0s. 6d.

Sir Frank Crisp: Donation in Trust for Microscopical Research, £200.

The Trustees of the Percy Sladen Memorial Fund: Third grant towards publication of Prof. Stanley Gardiner's *Researches in the Indian Ocean*, £200. (For third volume.)

1911.

The Trustees of the Percy Sladen Memorial Fund: Second Donation towards the publication of the third volume on the *Indian Ocean Researches*, £70.

The same: First Donation towards the fourth volume, £130.

1912.

The Indian Government: Contribution towards the illustration of Mr. E. P. Stebbing's paper on Himalayan *Chermes*, £46 15s. 2d.

The late Mr. Francis Tagart, £500 free of Legacy Duty.

The late Sir Joseph Dalton Hooker, O.M., G.C.S.I., £100 free of Legacy Duty.

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- and Secretary, 25; Index to the Linnean Herbarium, Supplement, 1-152; on Linné's cochineal insects, 20; on recent investigation of the Linnean Herbarium, 20.
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- Johnston, Dr. T. H., elected, 6; proposed, 1.
- Jones, W. N., admitted, 1.
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- Lapland Drum, *see* Jackson, Dr. B. D.
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- Laurie, R., elected, 6; proposed, 1.
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- Lycaete Barringtoniæ* in flower, exhibited (Longstaff), 68.
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- Maw, G., deceased, 21; obituary, 62.
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- Michael, A. D., nominated Scrutineer, 15.
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- Monekton, H. W., appointed V.-P., 67; elected Councillor and Treasurer, 25.
- Moore, Sir F. W., admitted, 21; elected, 6; proposed, 1.
- Morley, C., Ichneumonidæ of the Seychelles, 10.
- Moss, Dr. C. E., elected, 18; proposed, 15.
- Mosses of New Zealand (Dixon), 6.
- Moulton, J. C., admitted, 68; exhibited Trilobites-like larvæ from Borneo, 70.
- Müller, Rev. J. S., elected, 67; proposed, 19.
- Murie, Dr. J., exhibited *Crepidula fornicata*, 2.
- Mutation problem in *Oenothera* (Gates), 3.
- Nannorrhops Ritchiana*, H. Wendl., seeds received from Dr. Henderson, distributed, 9.
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Norman, Canon A. M., *Synagoga mira*, 70.

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Oliver, Prof. F. W., communication by (Pranker), 20; elected Councillor, 25.

Oman, J. C., deceased, 21.

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Palæozoic Ferns, *see* Scott, Dr. D. H. Palmer, Dr. A. E. A., exhibited white canaries from New Zealand, 69.

Patterson, A., proposed Associate, 10.

Pauropoda, *see* *Diplopoda*.

Pearse, Miss E., exhibited living Phasmodæ, 17.

Pegler, Miss A., elected Associate, 13; proposed, 9.

Pelagic Actinian Larvæ (Bamford), 2.

Percy Sladen Expedition, Acarina of the (Wurburton), 70; Terrestrial Isopoda of the (Budde-Lund), 69.

Perkins, Dr. R. C. L., to receive Linnean Medal, 19; Linnean Medal presented to, 40.

Phasmodæ, living, exhibited (Dendy, Pearse), 17; Orthoptera-Phasmodæ of the Seychelles (Bolivar and Ferrière), 17.

Phillips, Miss E. M., exhibited water-colour drawings of Barbados flora, 15.

Phillips, E. P., elected, 67; proposed, 19.

Phyllody in *Trifolium repens*, exhibited (Rathbone), 17; note on the exhibit, 79.

Phyllotoma aceris, *see* Dendy, Prof. A.

Phytogeographical Excursion, *see* Druce, G. C.

Phytoplankton periodicity (W. & G. S. West), 17.

Pigeons, P. Scherdlin on their diminution in Strassburg, 11.

Poa trivialis, a viviparous, exhibited (Rendle), 7.

Polycistina, microscope-slides exhibited (Mastin), 18.

Porter, Dr. Annie, admitted, 67; elected, 6; proposed, 1.

Portugal, *see* Dixon, H. N.

Poulton, Prof. E. B., appointed Vice-Presidents, 67; elected President and Councillor, 25; read alterations in Bye-Laws, 67; received Linnean Medal on behalf of Dr. Perkins, 40.

Pranker, Miss T. L., Structure of *Lagenostoma ovoides*, Will., 20.

President elected, 25.

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Proliferation in rambler rose, exhibited (Sillem), 68.

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Regan, C. T., New Fishes from Aldabra, 10.

Reid, C., Vote of thanks for Address, seconded by, 39.

Reid, Mrs. E. M., admitted, 68; elected, 67; proposed, 18.

Rendle, Dr. A. B., Councillor retired, 25; elected Auditor, 18; exhibited a viviparous *Poa trivialis*, Linn., 7; dissected leaf-form of *Cochlearia Armoracia*, 8.

Rhizopoda, Freshwater, of U.S.A. and Seychelles (Willes), 20.

Ridewood, Dr. W. G., elected Councillor, 25.

Ridley, H. N., elected Councillor, 25.

Rose, *see* Rambler rose.

Rothschild, Hon. N. C., elected Auditor, 18.

Row, R. W. H., on larvæ of a Saw-fly, 70.

St. Andrews, its marine flora (Lawson), 9.

Salmon, C. E., exhibited an abnormal *Orchis*, 13.

Samuel, Miss M., admitted, 68; elected, 15; proposed, 10.

Sands, W. N., proposed, 68.

Sapromyzidæ, *see* Lamb, C. G.

Saunders, Miss E. R., appointed V.-P., 67; elected Councillor, 25.

- Saw-fly, cocoons of larvæ of a, exhibited (Dendy and Row), 69.
- Sayce, O. A., deceased, 8, 21; obituary, 63.
- Scherdlin, P., letter from, on the pigeons of Strassburg Cathedral, 11.
- Sciariidæ of the Seychelles (Enderlein), 10.
- Scott, Dr. D. H., appointed V.-P., 67; on *Botrychioxylon paradoxum*, a Palæozoic Fern with Secondary Wood, 19; elected Councillor, 25; on death of Sir Joseph Hooker, 7; on death of Prof. Strasburger, 24; on variations in foliage, 6; on resignation of Zoological Secretary (Prof. A. Dendy), 25; on the Palæozoic Fern *Zygopteris Grayi*, Will., 2; Presidential Address, 26-39; nominated Scrutineers, 15, 25; read alterations in the Bye-Laws, 19.
- Scott, Hugh, Coleoptera of the Seychelles, 69.
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- Sherborn, C. D., elected Associate, 15; proposed, 10.
- Sicard, Dr. A., Coccinellidæ des Seychelles, 69.
- Sillem, C., exhibited proliferation in rambler rose, 68.
- Sim, T. R., withdrawn, 24.
- Sladen Expedition, *see* Percy Sladen Expedition.
- Slater, M. B., withdrawn, 24.
- "Slipper Limpet" exhibited (Murie), 2.
- Smith, A. M., admitted, 13; elected, 6; proposed, 1.
- Snail, hybrid, exhibited (Bullen), 10.
- Socin, *see* Christ-Socin.
- Somatic characters, correlation of (Meek), 70.
- South Africa, *see* Stapf, Dr. O.
- Sponges, *see* Glass-sponges.
- Stapf, Dr. O., communication by (Domin), 20; elected Councillor and Secretary, 25; exhibited Cactoid Euphorbias from S. Africa, 16.
- Stayner, F. J., proposed, 68.
- Stead, D. G., elected, 15; proposed, 10.
- Stebbing, Rev. T. R. R., Historic doubts about *Vaunthompsonia*, 16, 78; nominated Scrutineer, 25; Vote of thanks for Address moved by, 39.
- Stephens, Miss E. L., elected, 6; proposed, 1.
- Stone, H., withdrawn, 24.
- Stopes, Dr. Marie, exhibited *Cardamine pratensis* with bulbils, 68.
- Strasburger, Prof. E., deceased, 21, 24; obituary, 64-66.
- Strassburg, *see* Scherdlin, P.
- Synagoga mira* (Norman), 70.
- Tagart, F., deceased, 21; obituary, 66.
- Thames Valley, *see* Friend, Rev. H.
- Thomas, D., withdrawn, 24.
- Thomas, Miss E. N., elected Councillor, 25.
- Thompson, H. S., exhibited drawings of Alpine flowers by G. Flemwell, 69.
- Tibet, Little, *see* Kashmir.
- Tipulidæ of the Seychelles (Edwards), 10.
- Treasurer elected (H. W. Monckton), 25.
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- Trilobite-like larvæ from Borneo, exhibited (Moulton), 70.
- Turkestan, *see* Kashmir.
- Turnbull, J. G., elected, 69; proposed, 21.
- Turner, Miss E. L., showed lantern-slides of Bittern discovered in Norfolk, 9.
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- Wailes, G. H., Freshwater Rhizopoda of U.S.A. and Seychelles, 20.
 Wakefield, Miss E. M., admitted, 8; elected, 6; proposed, 1.
 Walker, A. O., Distribution of *Elodea canadensis*, Michx., in the British Isles, 2, 71-77; exhibited *Olerodendron trichotomum*, Thunb., in fruit, 3.
 Warburton, C., Acarina of the Percy Sladen Expedition, 70.
 Water-colour drawings of Barbados flora, exhibited (Phillips), 15.
 Waterfall, C., admitted, 1.
 Webb, W. M., exhibited *Lygidium hypnorum*, 20.
 West, W. & G. S., Periodicity of Phytoplankton, 17.
 White canaries exhibited (Palmer), 69.
 Whitwell, W., withdrawn, 24.
 Williams, F. N., on exhibitions at the Meetings, 10.
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 Wilmott, A. J., elected, 6; proposed, 1.
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INDEX
TO THE
LINNEAN HERBARIUM,
WITH
INDICATION OF THE TYPES OF SPECIES MARKED
BY CARL VON LINNÉ.

BY
BENJAMIN DAYDON JACKSON,
KNIGHT OF THE ROYAL SWEDISH ORDER OF THE POLAR STAR,
HON. PH.D., & A.M., UPSAL ;
GENERAL SECRETARY OF THE LINNEAN SOCIETY OF LONDON.

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INTRODUCTION.

IN the autumn of 1906 a suggestion was made to the Council of the Linnean Society of London, that a Catalogue of the contents of the Linnean Herbarium, together with a series of photographic illustrations of selected types from it, would be an appropriate publication for the celebration of the 200th anniversary of the birth of Carl von Linné.

Experiments showed that a fairly complete Catalogue of the sheets in the herbarium in question, would extend to about three volumes of the Society's Journal, and that its compilation would require from fifteen to eighteen months; the suggestion was therefore found to be impossible of fulfilment, quite apart from its cost. The second proposal was entertained by the Council so far as preparing estimates of the cost of issuing a series of 100 collotype plates, the actual size of the specimens, provided one hundred subscribers at a given rate were forthcoming, but as only seventeen subscribers offered, that project also fell through.

In order in some measure to meet the wishes expressed, the Council sanctioned the printing of a catalogue of generic names in the Linnean Herbarium in the original sequence, with the number of the sheets under each, followed by an alphabetical index, and preceded by an account of an enumeration by Linné himself of the plants possessed by him in 1755; advance copies were printed and distributed before the 23rd May, 1907, and reissued in the 'Proceedings' in October of that year.

Though the original project could not be carried out, it was not forgotten, and last autumn it occurred to the compiler, that an index on a modest scale, showing by special type every plant authenticated by the author himself, or at his dictation, would be acceptable; the following pages are the result.

The Linnean sequence has been preserved in the herbarium as far as possible, and more than one hundred specimens which had been transferred by Smith to other genera have been replaced, so that the Linnean material is again brought together. As an instance, Smith removed 4 species from *Oldenlandia* to *Hedyotis*, thereby obscuring Linné's conception of the former genus. A few slight slips of the pen have been disregarded, but important variations of name have been noted. The zoological genera in the herbarium, such as *Flustra*, have not been catalogued specifically.

B. DAYDON JACKSON.

October, 1912.

THE LINNEAN HERBARIUM.

THE Linnean herbarium itself is known at home and abroad to many botanists, who have consulted it, but to the modern systematist, accustomed to good specimens accompanied by full information on the collector's tickets, it may be disappointing. The paper is small, $12\frac{1}{2}$ by 8 inches (32 cm. $\times$ 20.5 cm.), and the information afforded is often meagre, and usually absent. Linné evidently trusted to a strong and retentive memory, so that his notes are very brief, or little more than arbitrary signs to remind him of the source of the specimen. The specimens are usually authenticated by a number, namely, that prefixed to the species in the first edition of the 'Species Plantarum' in 1753, followed by the specific or "trivial" name; the species added to his collection up to the 10th edition of his 'Systema Naturæ,' vol. ii. 1759, are shown by capital letters, in the case of *Hedysarum* extending from A to L. With the second edition of the 'Species Plantarum' in 1762-3, an entirely new series of numbering was used, and in the latest (12th) edition of the 'Systema Naturæ' in 1767, additional of the forms were numbered on, but put nearest to their allies, disregarding their numerical order; this enlarged numbering is not employed in the Herbarium.

In small or moderately large genera, one cover suffices; at the bottom left-hand corner is the generic name written by Linné, but in the case of monotypic genera, the number "1" is often the only authentication on the species-sheets. I have in such cases printed the name as being non-existent, but have put (pl.) after it, to show that the type is there, though not verified under the hand of the author. Similarly, all names in *italic* type are names either not vouched for by Linné, or are absent from the collection; the names written by him are printed in ordinary Roman type; where the name has been written by an amanuensis, I have added (m. Sol.)=manu Solandri, or other assistant as the case may be. It is only where I am convinced by the special circumstances of each case, that I have allowed myself this licence. Thus, we have the distinct assurance from Sir J. E. Smith, that Solander wrote all the specific names to Patrick Browne's specimens (Linn. Corr. i. 43), and if corroboration be wanted, in the Linnean library there is a copy of Browne's 'History of Jamaica' with the Linnean trivial names written in the margin by Linné himself. Other amanuenses were Olof Söderberg, Gabriel Elmgren, J. P. Falk, Pehr Löfling, Erik Gustaf Lidbeck, Anders Dahl, and the younger Linné. As to the first and second, I am unable to assert that their writing is in the herbarium; but when the writer is, so far as I am concerned, uncertain, I have shown it by adding (m. am.)=manu amanuensis. The handwriting of the others is known, from some

of whom, *e. g.* Löfing, many letters are preserved in Linné's correspondence, and this valuable body of letters has been constantly appealed to for information or confirmation.

PLAN OF INDEX.

The method of framing the index was as follows. A list of all names of genera and species issued by Linné was drawn up, chiefly from Petermann's Index to Richter's 'Codex Linnæanus,' with some additions and corrections. The herbarium was then examined sheet by sheet, and the Linnean names marked against the list. Many manuscript and unpublished names have been found, and are distinguished by the affix (MS.); further, a fair number of species which were published in the 'Supplementum' of the younger Linné in 1781, have been marked as in (Suppl.). These last are of interest as making certain which species were described by the elder Linné, about 185 in all, for the book itself gives no clue as to authorship. I may remark parenthetically, that the manuscript of the 'Supplementum' sheds but little light upon this question, as the earlier part has been copied by another hand, and practically none of it remains in the handwriting of Linné.

EARLIER ENUMERATIONS.

The next step was to collate certain enumerations existing in Linné's writing.

1. An interleaved copy of 'Species Plantarum' ed. 1, 1753, in which the number before each species then possessed by Linné is underscored. This was copied by Jonas Dryander in or about 1785, when the Linnean and Banksian herbaria were collated (Proc. Linn. Soc. 1887-88, p. 28; Smith in Linn. Lachesis, pref. p. ix.). A transcript of this copy is also at Kew (Proc. 1906-7, p. 91). I found in the Linnean copy that the printed pages 849-856 inclusive had been cut out, the interleaves alone remaining; as the Banksian copy has no marks on the corresponding pages, it is clear that these pages were already missing when the Linnean books came into the possession of Smith.

2. A manuscript list described in the 'Proceedings' 1906-7, pp. 90-95: it was brought down to the spring of 1755, most of the marking being by dots prefixed.

3. A copy of the second volume of the twelfth edition of the 'Systema Naturæ,' 1767, the numbers of the species represented in the Linnean herbarium being underscored as in No. 1.

The collation of these three Linnean lists, with the actual noting from the herbarium as it now exists, permits of a few observations being made. Each of these lists is faulty; the third especially so, for such genera as *Althæa*, *Phlomis*, and *Pulmonaria*

have escaped marking altogether; pages 408 and 409 have been turned over together, so that three small genera and the first third of *Antirrhinum* have been missed, though the remainder of the latter has been duly marked; such omissions show that the marking was done from memory. *Trifolium comosum* is not in the herbarium now, and was not noted in 1753 nor 1767, but was so in 1755; in all probability the dot in the manuscript catalogue is an error, and the plant was at no time in Linné's possession.

CONTRIBUTORS TO THE HERBARIUM.

At the hundredth anniversary of this Society on 24th May, 1888, I gave an account so far as then ascertainable of the contributors to the Linnean herbarium (Proc. 1887-8, pp. 18-22). Since then fresh information has been obtained from Prof. T. M. Fries's 'Linné,' 1903, the early volumes (i.-vi.) of the correspondence of C. v. Linné (Bref och skrivelser) and my examination of the entire collection. The last word cannot be given as yet, but when the whole of the letters are printed, it will be easier to add to the present account, than it is now to give a complete presentation. The following may be considered as the chief contributors to the herbarium.

AHLELÖF, JONAS JOACHIMSON (1717-1783), a pupil of Linné, afterwards rector of Frillesås.

ALLAMAND, FRÉDÉRIQUE (fl. 1770-86), born at Lausanne, graduated at Leyden in 1749, and communicated Surinam specimens from 1756 to 1771 and later.

ALLIONI, CARLO (1725-1804). Italian alpine plants.

ALSTRÖMER, Baron CLAS (1736-1794). Prof. T. M. Fries states that during his travels in Spain and the South of Europe, from 1760 to 1764, the Baron sent to Linné no fewer than 1550 dried plants, 250 sorts of seeds, 202 shells, 60 corals, and 94 fishes, with many living plants, bulbs and roots. These numbers rest upon the correspondence, as I do not find tickets or memoranda from him in the herbarium. Linné speaks of receiving "several packets, which he had partly collected himself and partly received from others"; possibly many were exchanged or given away.

AMMANN, JOHANN (1707-1741), born at Schaffhausen, died as Professor of Botany at St. Petersburg; during his short life, he corresponded and sent dried plants.

ANKARCRONA, Admiral THEODOR CHRISTOPHER, afterwards ennobled (1687-1750). With other plants communicated *Phaseolus radiatus* about the year 1742.

ARDUINO, PIETRO (1728-1805); sent many plants, which are usually marked "Ard." close to the base of the stem.

ARGILLANDER, ABRAHAM (1722-1800); communicated Swedish and Finnish plants.

- ASCANIUS, PEDER (1723–1803), a pupil of Linné, who devoted himself to zoology and mineralogy; his name is mentioned as a contributor to the *Centuria secunda* (Am. Acad. iv. 330).
- BÄCK, ABRAHAM (1713–1795), Linné's most intimate friend, from whom he received occasional gifts of plants.
- BÆLTER, SVEN (1713–1760), Chaplain to a Russian embassy; sent a few plants from Russia.
- BANKS, Sir JOSEPH (1743–1820); sent specimens of *Banksia*.
- BARNEDES, MIGUEL (d. 1771). Spanish plants. Alströmer, Hallman, and Löfving were personally acquainted with him.
- BARRÈRE, PIERRE (1711–1755). European plants, chiefly from France.
- BARTRAM, JOHN (1699–1777), "King's botanist in America"; a few plants from the North United States; some through Dr. Alex. Garden.
- BASSI, FERDINANDO (1710?–1774), Prefect of the Bologna garden, whence he sent plants.
- BASTER, JOB (1711–1775). A collection of plants from Java, more than 300 in all.
- BERGEN, CARL AUGUST VON (1704–1759), professor at Frankfurt-on-the-Oder.
- BERGIUS, PETER JONAS (1730–1790), a pupil of Linné, settled at Stockholm as an eminent physician; collected plants in Gotland; best known for his volume '*Descriptiones plantarum ex Capite Bonæ Spei*,' 1767.
- BERLIN, ANDERS (1746–1773). European plants, and some from Guinea, where he died.
- BJELKE, Baron STEN CARL (1709–1753). Visited Russia in 1744, whence he sent MS. catalogues of plants from Russian collectors, and plants also.
- BLADH, PEHR JOHAN (1746–1816). Resident for some years at Canton; some Chinese and Cape plants in the herbarium possibly came through Thunberg.
- BRAAD, CHRISTOPHER HENRIK (1721–1781); supercargo in the Swedish East India Company's service, who brought home plants from Surat and other Asiatic ports.
- BRANDER (afterwards SKJÖLDEBRAND), ERIK (1720–1814). Swedish consul at Algiers from 1753 to 1765; sent insects and a few plants from North Africa.
- BREYNE, JOHANN PHILLIPP (1680–1764). His contributions are mentioned in the '*Hortus Upsaliensis*.'
- BROWNE, PATRICK (1720–1790). Born in Ireland, he practised as a doctor in the West Indies, and published in 1756 a folio volume on the Natural History of Jamaica; his herbarium was bought by Linné through Collinson in 1758 for £8 8s.; the purchaser marvelled that the English should let so fine a collection slip through their hands for "100 plätar," that is, double what it cost Linné. The specimens are denoted by "Br." in Linné's hand, but the names were written by

Solander at the extreme bottom of each sheet; *cf.* Smith, Linn. Corr. i. pp. 42-44.

BURGESS, *Rev.* Dr. JOHN (fl. 1771-1805), lichenologist at Kirk-michael, Dumfries.

BURMAN, JAN (1706-1779), eminent Dutch botanist; contributed Cape and Javan plants: father of

BURMAN, NICOLAUS LAURENT (1734-1793). Visited Uppsala in 1760, and afterwards was a frequent correspondent.

CATESBY, MARK (1680-1749), author of the 'Natural History of Carolina,' etc.

CELSIUS, OLOF, the elder (1670-1756). Linné's early benefactor in his Uppsala student period. He returned to the garden, plants he had taken thence when the place lay in neglect.

CLAYTON, JOHN (1686 or 1693?-1773). Born in Middlesex, collected in Virginia, sent plants to Gronovius, who published his 'Flora Virginica' in 1739-43. Linné says:—"When I assisted Dr. Gronovius in examining plants from Virginia, I got duplicates of most of them." The labels to these are in the handwriting of Gronovius.

CLIFFORD, GEORGE (1685-1760). Linné's patron at Hartecamp, near Haarlem, who "had an excellent herbarium from which he gave me all the duplicates"; (see also 'Sp. Pl.' ed. 2. præf.). These are recognisable by their thick good paper, which has been cut down from the original size, 18" x 11" (45.5 cm. x 28 cm.) to the small size noted on p. 7. They amount to about 100 sheets, most of them still further marked, by portions of the printed vase at the base of the stem of the specimen, or the ticket at the left hand at the bottom, marks well known to those who have referred to the Herb. Clifford. at the British Museum.

COLLINSON, PETER (1694-1768). Contributed plants from his garden; bought Browne's herbarium on behalf of Linné in 1758.

CRONSTEDT, *Count* CARL JOHAN (1709-1779) [not "Jakob"].

DAHL, ANDERS (1751-1789). The records in the herbarium are probably only as an amanuensis; his names are on the back of each sheet, close to the bottom.

DAHLBERG, *Colonel* CARL GUSTAF (fl. 1754-75). A Swede residing in Surinam; during a visit to his native country in 1754, he invited Rolander, then a promising pupil at Uppsala, to return with him. Plants were sent to Linné from Dahlberg, including those which came through the King (Gustaf III.), which were the last upon which Linné was able to do any botanic work; many were published in the 'Supplementum.'

DALBERG, NILS (1736-1820), a brother of the last, though he spelled his name differently; a student at Uppsala, became eminent as a medical man, and enthusiastic naturalist.

DALMAN, JOHAN FREDRIK (1726-1809). Sent some plants from India, the result of a voyage thither in 1748.

- DE GEER, Count CHARLES (1720-1778). Eminent entomologist; having assisted Rolander with funds for his South American journey, the latter on his return, gave all his plants to De Geer, "who made me a present of every one of them." Not a single plant seems to have been given direct to Linné.
- DÉMIDOFF, Prince GRÉGORIE (fl. 1750-60). In a letter dated 15th May, 1750, he spoke of his collection of more than 800 plants sent to Linné for naming, with permission to retain duplicates. Amongst these came Steller's from Kamtschatka, Gerber's from Astrachan and the River Don, and Lerche's from Persia. The following March he thanked Linné for his work, and said that the Moscow plants were of his own gathering. Karamyschew regretted that all were not allowed to remain in Linné's possession (Am. Acad. vii. 447).
- DICK. This name is attached to a few plants in the herbarium, sent by Gessner in 1763, as collected by Dick and Fuslin in the Rætian Alps.
- DILLENIIUS, JOHANN JAKOB (1687-1747). "Many from the garden at Oxford."
- DUCHESNE, ANTOINE NICHOLAS (1747-1827). Specimens of *Fragaria*, named.
- EHRHART, FRIEDRICH (1736-1795). Many specimens named by him, especially amongst the cryptogams.
- EKEBERG, CARL GUSTAF (1716-1784); Captain of an Indiaman, who brought plants to Linné from tropical Asia.
- ELLIS, JOHN (1711-1776), a London merchant and friend of Peter Collinson; these two were Linné's most constant English correspondents; Ellis sent American plants and specimens of *Corallina*.
- ESCALLON, —. (fl. 1777). Plants sent through Mutis.
- FABRICIUS, JOHAN CHRISTIAN (1745-1808). After studying two years at Uppsala, became Professor at Copenhagen and afterwards at Kiel; eminent as an entomologist, see Linné's remark quoted under Zoega. A few plants sent to Linné.
- FAGRAEUS, JONAS THEODOR (1729-1797). Studied at Lund and Uppsala; afterwards custodian of Baron C. Alströmer's collections at Alingsås.
- FALCK (or FALK), JOHAN PEHR (1733-1774). Sent plants from Russia, also from Gotland.
- FERBER, JOHAN JAKOB (1743-1790). Specimens sent during his travels in the South of Europe.
- FORSSKÅHL, JOHAN CHRISTIAN (1725-1756), brother of the following, in spite of the varied spelling; sent plants from Finland.
- FORSSKÅL, PEHR (1736-1768). Plants from Germany; afterwards made collections of plants and animals in Egypt and Arabia, published by C. Niebuhr, the sole survivor of the expedition. Zoega wrote the text of '*Flora ægyptiaco-arabica*,' Havniæ, 1775.

- FORSTER, JOHANN GEORG ADAM (1754-1794), son of the next named; accompanied his father on Cook's second circumnavigation; afterwards Professor at Wilna.
- FORSTER, JOHANN REINHOLD (1729-1798). Naturalist on board the 'Resolution,' with George Forster and A. Sparrman. Sundry plants were supplied to Linné from the Southern hemisphere.
- FOTHERGILL, JOHN (1712-1780). Corresponded with Linné, and sent him both plants and animals.
- GABRIEL, *Frater* [*Baron DE LATOURDAIGNES?*] (fl. 1757-1768). Plants sent from Aix in Provence; the collector was a Capuchin monk.
- GAHN, HENRIK (1747-1816). Specimens sent from England, where he was offered the chance of taking part in a voyage of exploration; his decision to decline the proposition seems to have annoyed Linné.
- GARDEN, ALEXANDER (1730-1791). Plants, etc. from Carolina, principally through Collinson and John Ellis.
- GERARD, LOUIS (1733-1819). Provençal plants.
- GERBER, TRAUGOTT (fl. 1739-1741), Prefect of the Moscow Medical Garden; drew up lists of plants observed by the rivers Volga and Don, which lists were sent by Baron Bjelke to Linné, and some of the plants by Prince Demidoff.
- GESSNER, JOHANN (1709-1790), of Zürich, where he was professor of mathematics and physics, at the same time the friend and correspondent of Haller and Linné; Gessner communicated Dick's plants.
- GLEDITSCH, JOHANN GOTTLIEB (1714-1786), professor in Berlin.
- GMELIN, JOHANN GEORG (1709-1755). Spent 1733-1743 in Siberian exploration for the Russian Government; from 1749 professor in Tübingen. Linné's statement is:—"On Gmelin's return from Siberia, . . . he gave me a specimen of every plant he had collected, in order to learn my opinion of each." Steller was one of Gmelin's assistants.
- GORDON, JAMES (d. 1783), Nurseryman at Mile End, 1750-1776; sent plants to Linné.
- GORTER, DAVID VAN (1717-1783). Became physician in the Russian service; sent plants from Russia.
- GOUAN, ANTOINE (1733-1821). Constant correspondent, sending material from Montpellier and its neighbourhood. His labels are extremely neat.
- GRONOVIIUS, JAN FREDRIK (1690-1762). An early friend and supporter of Linné when in Leyden; sent Clayton's duplicates from Virginia.
- GUNNER, JOHAN ERNST (1718-1773), bishop of Trondhjem, and author of 'Flora norvegica'; a few marine algæ sent to Linné.
- HAGSTRÖM, JOHAN OTTO (1716-1792). One of Linné's cleverest pupils; he wrote on bee-flowers.

- HALLER, ALBRECHT VON (1708-1777). Seems to have supplied a few specimens only.
- HALLMANN, DANIEL ZACHARÆ (1722-1782). Specimens from Spain.
- HASSELQUIST, FREDRIK (1722-1752). Sent to Egypt and Palestine; died at Smyrna. Queen Lovisa Ulrika redeemed his collections, and Linné received specimens of each when there were three. Linné says:—"I have a specimen of every one of the plants found by Hasselquist in Anatolia, Egypt, and Palestine." This seems to be exaggerated, as the list I have taken out of the plants marked as collected by Hasselquist, falls far short of the number cited by Linné as observed by the traveller in 'Flora Palæstina' (Am. Acad. iv. 449-467).
- HEBENSTREIT, JOHANN ERNST (1702-1757). Plants from the East.
- HEINZELMANN, JOHANN GOTTFRIED (fl. 1732). Historiographer to the Russian government; recorded plants from Astrachan.
- HOUSTON, WILLIAM (1695-1733). American plants received through P. Miller.
- HUDSON, WILLIAM (1730-1793). Author of the 'Flora anglica.'
- JACQUIN, BARON NICOLAUS JOSEPH VON (1727-1817). A valued correspondent; most of his tickets were pasted down by Linné. Plants from America, Austria, and many from gardens.
- JUSSIEU, BERNARD DE (1699-1776). Seeds to Linné in large quantity for the Uppsala garden during many years; many plants reared from them, no doubt, are concealed under the initials H. U.=Hortus Upsaliensis: "he also gave me a great many dried specimens."
- KÄHLER, MARTIN (1728-1773). Chiefly plants from Italy; many are marked "Kh."
- KALM, PEHR (1715-1779). This pupil of Linné travelled from 1747 to 1749 in North America and Canada; he "collected a vast number . . . and gave me one of each." These specimens are marked "K."
- KLEYNHOF, CHRISTIAEN (fl. 1761-65), "who formed the largest botanical garden in Java, and there raised a great many East Indian plants, on his return home to Holland, sent us a large trunk full." Some Japanese plants are also recorded from him.
- KÖNIG, JOHAN GERARD (1728-1785). Several hundreds of plants from Iceland and Southern India; the latter are labelled with the collector's own tickets, and sometimes annotated by the younger Linné.
- KRASCHENINNIKOW, STEPHAN PETROVIC (1713-1755). Siberian plants.
- LAGERSTRÖM, MAGNUS (d. 1759). Engaged in the East Indian trade; communicated some Asiatic rarities to Linné.
- LATOURETTE, MARC ANTOINE LOUIS CLARET DE (1729-1793). A few specimens noted as contributed by him.

- LAWSON, ISAAC (fl. 1734-1759). A Scottish graduate of Leyden, and a generous friend to Linné. D. Z. Hallman met him in London in 1759.
- LAXMANN, ERIC (1737-1796). A correspondent of Linné who sent Siberian plants.
- LECHE, JOHAN (1704-1764). A few sheets from his herbarium written up by him.
- LERCHE, JOHAN JAKOB (1703-1780). Persian plants; some from Astrachan were received in 1735.
- LEYSER, FRIEDERICH WILHELM VON (1731-1815). Sent a few plants from Central Europe.
- LINNÉ, CARL VON (1707-1778). See separate account on p. 17.
- LINNÉ, CARL VON (1741-1783), son of the foregoing. Chiefly as amanuensis, and editor of the 'Supplementum.' Most of his own collections are incorporated with Smith's herbarium; an account of these must be reserved for a future occasion.
- LÖFLING, PEHR (1729-1756). Amanuensis and favourite pupil; sent Spanish and Spanish American plants to Uppsala, most of which are marked "*Hispan. Löfl.*"
- LOUREIRO, JUAN (1715-1796). Plants from Cochinchina; afterwards brought out his '*Flora cochinchinensis*,' 1790.
- LUDWIG, CHRISTIAN GOTTLIEB (1709-1773), professor in Leipzig.
- MAGNOL, PIERRE (1638-1715). His herbarium was bought by Sauvages, and presented to Linné; most of the specimens are marked "M" close to the base of the plant, sometimes also "*Monsp.*" Linné's statement is, "Professor Sauvages had received from Magnol (the great botanist) his entire herbarium, which Sauvages made me a present of."
- MARTIN, ANTON ROLANDSSON (1729-1786). Spitsbergen.
- MASSON, FRANCIS (1741-1805). A few plants from the Cape.
- MILLER, PHILIP (1691-1771). "Miller of Chelsea permitted me to collect many in the garden, and gave me several dried specimens, collected by Houston in South America."
- MINUART, JUAN (1673-1768). Spanish plants; he was a friend of Löfling.
- MITCHELL, JOHN (d. 1768), resident in Virginia from 1700 to 1748, when he returned to England.
- MONTI, GIUSEPPE (1682-1760), professor of botany at Bologna.
- MONTIN, LARS (1723-1785), pupil of Linné; travelled in 1749 in Lule Lappmark for plants.
- MÜNCHHAUSEN, OTTO, *Freiherr* VON (1716-1774). North German plants.
- MURRAY, ADOLF (1751-1803), a favourite pupil of Linné, though amongst the younger students; sent plants from Padua to Linné.
- MUTIS, JOSÉ CELESTINO (1732-1808), resident in New Grenada (Colombia); his second collection arrived when Linné was too ill to examine them, so that the younger Linné described

- them in the 'Supplementum' and placed them in the herbarium with his written names. Escallon's plants were sent by Mutis. See Smith, *Corr. Linn.* ii. pp. 532, 537.
- MYGIND, FRANDS, afterwards FRANTZ VON (1710-1789). Many Austrian plants are marked as from him.
- NORDBERG, —. The name occurs in the 'Supplementum,' p. 265, as the sender of specimens of the nutmeg tree from Banda.
- OEDER, GEORG CHRISTIAN (1728-1791), the first editor of the 'Flora danica.'
- OLDENLAND, HENRIK BERNARD (d. 1761). Cape plants collected about 1760; given to Linné by J. Burman.
- ORTEGA, JOSÉ (d. 1761). Spanish plants; a friend of Löffling during his two years' stay in Spain.
- OSBECK, PEHR (1723-1805). Travelled to Canton as ship's chaplain; his plants are marked in the herbarium with O, or more frequently on the back with the name in full, as "Habitat in China. Osbeck"; about 600 plants from China.
- PALLAS, PETER SIMON (1741-1811). The distinguished traveller in Russia, who was born and died in Berlin.
- PONTIN, DAVID DAVIDSON (1733-1809). A cousin of Hasselquist; transmitted plants from Malabar.
- RATHGEB, JOSEPH VON (fl. 1744) of Venice, who sent Italian plants to Linné.
- RICHARD, LOUIS CLAUDE MARIE (1754-1821). Mentioned in the 'Mantissa' as a contributor.
- ROLANDER, DANIEL (1725-1793). One of Linné's pupils, who went to Surinam, but on his return to Sweden gave all his plants to Count De Geer, to Linné's great disgust at the "ungrateful Rolander."
- ROSÉN (afterwards ROSENBLAD), EBERHARD (1714-1796); professor at Lund, and younger brother of Linné's colleague Nils Rosén (von Rosenstein). Plants from Skåne.
- ROYEN, ADRIAAN VAN (1705-1779). "On my assisting Van Royen to arrange the garden belonging to the University of Leyden, I obtained not only a large number of recent plants, but also many dried ones."
- ROYEN, DAVID VAN (d. 1799), professor in Leyden.
- SAHLBERG, JOHAN (1741-1810). A few Swedish plants.
- SAUVAGES, FRANÇOIS BOISSIER DE LA CROIX DE (1706-1767). Linné's most valued correspondent abroad; he contributed plants from the south of France, and also Magnol's herbarium; many specimens are labelled by him.
- SCHREBER, JOHANN CHRISTIAN DANIEL (1739-1810), an eminent pupil of Linné.
- SCHMIDEL, CASIMIR CHRISTOPH (1718-1792).
- SCOPOLI, JOHANN ANTON (1723-1788). Author of 'Flora Carniolica,' etc.; plants from south-eastern Europe.
- SEGUIER, JEAN FRANÇOIS (1703-1784). Chiefly alpine plants from Monte Baldo near Verona.

- SIBTHORP, HUMPHREY (1713 ?-1797), professor of botany at Oxford.
- SOLANDER, DANIEL (1736-1782). Next to Löfving, esteemed by Linné as his favourite pupil; plants from Pite Lappmark and England; wrote up Browne's Jamaica plants in the herbarium in 1759, and shortly afterwards left Sweden for London; never returned to his native land. See Biography in Banks's 'Journal,' edited by Sir Joseph Hooker, London, 1896, pp. xxxviii-xlii, with portrait by John Zoffany.
- SONNERAT, PIERRE (1749-1814), celebrated traveller in Tropical Asia.
- SPARRMAN, ANDERS (1748-1820). Another of Linné's noted pupils. He travelled to China (Canton), and published his travels, first as a thesis, and afterwards in a volume. Whilst staying at the Cape he was induced to join the Forsters in Cook's second voyage, on board the 'Resolution' in 1772, returning with them to the Cape in 1775 and coming home later. Numerous specimens in the herbarium, marked "Sp."
- STELLER, GEORG WILHELM (1709-1746). Assistant to Gmelin in the Siberian investigations; travelled to Kamschatka, and crossed to North America; he died at Tiumen on his return homewards. His collections were bought by Demidoff and some were given to Linné; about thirty of his plants are in the herbarium.
- SWARTZ, OLOF (1760-1818). The specimens are chiefly lichens, ticketed with extreme care, and usually marked "Sz." or "O.S."; probably incorporated by the younger Linné.
- TERNSTRÖM, CHRISTOPHER (1703-1746). Travelled to India for natural history purposes, and died at Pulo-Condor.
- THOUIN, ANDRÉ (1747-1824), a munificent donor of dried specimens, chiefly to the younger Linné when in Paris.
- THUNBERG, CARL PETER (1743-1828). Traveller to the Cape, Ceylon and Japan; successor to the younger Linné in the Chair at Uppsala. His plants are marked "T" with a number referring to some MS. catalogue.
- TORÉN, OLOF (d. 1753). A ship's chaplain, and contemporary of Osbeck; visited Surat and Malabar.
- TULBAGH, C. RIJK (d. 1771). Governor of the Cape possessions, who made Linné "a present of above 200 of the rarest plants that grow there, all put up with great care, besides a number of roots and bulbs alive, for the purpose of being planted in the garden."
- TURRA, ANTONIO (1730-1796), professor at Vicenza. Sent Italian plants.
- TUVÉN, ERIK (fl. 1754). Sent *Orchis sambucina* to Linné from near Stockholm, the first record in Sweden.
- VANDELLI, DOMINGOS (fl. 1768-1789), professor in Lisbon. Sent Portuguese plants, and some from the Colonies.
- VELEZ, CRISTÓBAL (d. 1753), a friend of Löfving. Sent Spanish plants to Linné; his collection passed into the hands of Quer.

- WACHENDORF, EVERHARD JACOB VAN (1702-1758), of Utrecht, where he was Professor.
- WAGNER, JOHANNES GERHARD (1706-1759). His contributions are noted in the 'Hortus Upsaliensis.'
- WÄNSTRÖM (or WENSTRÖM), S. M. Named in connection with two North African plants.
- WILCKE, SAMUEL GUSTAV [?] (fl. 1760-1765; d. 1791).
- ZINN, JOHANN GOTTFRIED (1727-1759). Named as a contributor of plants, in the preface to the second edition of the 'Species Plantarum.'
- ZOEGA, JOHAN (1742-1797). A Danish pupil highly esteemed by Linné: "If Fabricius brings me an insect, or Zoega a moss, I take off my hat and say, 'Be ye my teachers,'" Fries, "Linné," ii. Bil. xviii, 9.

The citations in the foregoing are mainly from Linné's own autobiography in the 'Egenhändiga anteckningar,' edited by Adam Afzelius in 1823; in the words of a translation from the manuscript printed in Maton's edition of Pulteney's 'Linnæus' in 1805, pp. 543-547, and condensed in Proc. Linn. Soc. 1887-88, pp. 20-22; see the Bibliography appended (p. 22).

LINNÉ AS A COLLECTOR.

Thus far we have considered the contributors to the herbarium; the next question is, how far did Linné himself collect specimens? His own statements are these:—"I have collected, from my infancy, all the plants of Sweden, together with those of the Swedish gardens" (Maton's ed. of Pulteney's 'Linnæus,' p. 574), but the following, copied from p. 515 of the same work, is somewhat discrepant; it describes him becoming acquainted with dried plants only, while living with Dr. K. Stobæus at Lund in 1727. "He was highly delighted with the mode of making a hortus siccus, and immediately began to collect all the plants that grew in the neighbourhood of Lund, and to glue them on paper." After deserting Lund for Uppsala, in the autumn of 1729, he told Prof. Olof Celsius that he "had above 600 indigenous plants preserved in his cabinet." From hints in his works, and from indications in his herbarium, he seems to have collected at various times, such as his Lapland journey: when at Tuggenforsen in Lycksele Lappmark he gathered and named for the first time the *Linnea borealis*, on 29th May, 1732, though the genus is stated to be of Gronovius upon a scrap which he gave his friend in 1735. His three journeys to Öland and Gotland, West Gotland, and Skåne, produced additions; but many plants are those gathered in the Uppsala Garden, the produce of those innumerable packets of seeds, sent year after year to him, from a more genial climate, and now recognisable in the herbarium under the initials H. U., i. e. Hortus Upsaliensis. The younger Hartman mentions with evident surprise that so many Swedish plants should be absent from the collection, and in

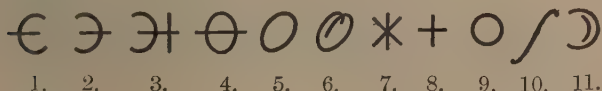
some cases the native plant is represented only by a specimen from a foreign country.

It can never be too emphatically stated, that it would be unjust to judge Linné's methods by modern ones, to condemn the pioneer because he could not foresee the latest developments, and to hold his collections cheap because the specimens are small and too often imperfect. The difficulties of travelling and sending specimens in those days quite sufficiently account for these imperfections.

SIGNS EMPLOYED.

The herbarium itself has been so often described in the memoirs mentioned in the bibliography, that a detailed account is not wanted here. Besides the small size, both of paper and the actual specimens, a modern observer is struck with the want of information as to the collector, place, and time of receipt. Linné, it is certain, trusted to his memory, using abbreviations and arbitrary signs to remind him, should occasion require, of the circumstances under which he acquired the specimens. Some of these signs offer no difficulty, such as K for Kalm; others have been held as more doubtful, as Sp. for Sparrman, which is correct. The younger Hartman was puzzled by the use of the sign ∇ , the Greek capital delta reversed, but Linné was accustomed to use many of these, which were usual among medical men of his time. This particular sign means *aqua*, easily guessed from *Agrostis stolonifera* ∇ : *tica* (Hartman, p. 28) or *Veronica Anagall.* ∇ (Sp. Pl. ed. 1, p. 12), the latter when written out being *Veronica Anagallis-aquatica*, this pre-Linnean name appearing in the synonymy. *Scandix Pecten* ♀ (Sp. Pl. ed. 1, p. 256) is now invariably written in full as *Scandix Pecten-Veneris*, the ♀ being the astronomical sign used for the planet Venus, as well as by the mineralogist for copper. A long catalogue might be compiled of Linné's signs in his various works, but as he used the same sign at times with different meanings, it need not be pursued further.

But ever since the herbarium came into the possession of the Society, three signs stand out as especially enigmatic, they are numbers 1, 2 and 4 in the following :—



Hartman in his preface says :—"One of these signs very often occurs, either with a specific name or alone, what their meaning is, has not yet been made out; by comparison they seem neither to indicate localities, person's names, the duration of the plants, annual, biennial, perennial or the like," but he also points out that No. 2 above is confined to Siberian plants. My own first reference to the herbarium, in August 1874, made me ask

Mr. Kippist, the then Librarian, what the sign (No. 4) meant, and he owned that he did not know, nor did anyone else.

The latest guess was that made a few years ago by Pastor Enander; his view is:—that they are certainly Russian letters, and thus may be regarded as pointing to J. P. Falck, born in Westgotland in the year 1732 or 1733, professor at the Medical College in St. Petersburg, with whom Linné stood in close relation (Salices, p. 11). Now although the sign No. 4 may be taken as the Greek Θ , it cannot stand for ϕ , and No. 1 resembles no current Russian letter whatever. This speculation therefore does not help us.

This tantalizing uncertainty therefore was a subsidiary point that I set myself on beginning my investigation of the herbarium to find out, where possible, what these puzzling memoranda meant. I therefore copied them each time they occurred, and at the end, I had lists of plants bearing the cryptic signs. By comparison of the whole material thus obtained, I was able to set out the meaning of most of the signs occurring, thus:—

- No. 1. Collected by Gerber, principally in the district of the river Don or Astrachan.
- No. 2. From Siberia, communicated by Gmelin.
- No. 3. From Kamtschatka, collected by Steller.
- No. 4. Hasselquist's plants, as also No. 6.
- No. 5. Almost certainly Osbeck; see No. 9.
- No. 6. Hasselquist, the sign appears to be derived from "Habitat in Oriente." I have tried to discover if there was any reason why two signs for one collector were employed, but so far fruitlessly.
- No. 7. Unknown; applied to *Bellis annua* and an unnamed specimen of *Conferva*.
- No. 8 is used as meaning "aristate," and
- No. 9 for "muticous," but the terms seem sometimes loosely applied, and in one case misapplied; the latter sign is also confused with Osbeck, and with $\odot$ for annual.
- No. 10. May be a long S, and stand for "suecia"; a cross-stroke is sometimes present; Linné often used a small initial, as stockholm.
- No. 11. Occurs in relation to *Anthericum calyculatum*, *Ornithogalum minimum*, *Salix rosmarinifolia*, and *Sisymbrium altissimum*. With regard to the third, Enander prints the sign as $\mathfrak{D}$, which means silver to the mineralogist, and may refer to a silvery appearance of the specimen.

NUMBERS EMPLOYED.

The system of numbering adopted by Linné must be mentioned. The numbers found in the herbarium, either alone, or in association with a specific name, refer to the numbers given in the original edition of the 'Species Plantarum' in 1753; additional species were lettered in capitals and intercalated in their appropriate

place: thus *Hedysarum* in the 10th edition of the 'Systema' has no fewer than twelve, A to L inclusive. In the second edition of the 'Species' 1762-3, an entirely new numbering was carried through, and in the 12th edition of the 'Systema' 1767, additions were numbered in sequence with the 'Species' numbers, but put into their affinity, regardless of numerical order, but this emended set was not applied to the herbarium. After this date, such numbers were abandoned. Numbers are also found referring to lists sent with plants.

DAMAGE TO HERBARIUM BEFORE 1783.

The herbarium suffered risks and actual damage before it came into the hands of Smith in 1784. We have an account by Beckmann, the author of the 'Century of Inventions,' that on 30th April, 1766, a fire broke out in Uppsala during a fierce gale and destroyed a large part of the town. Linné had his herbarium and library removed to a barn outside the town, but the risk to which it was exposed led him to build his little museum at Hammarby, some distance from the house, and without a fireplace. This in its turn produced the opposite evils of damp and mould; the younger Linné complained of the terrible damage done by mice, mould and insects, and at the first opportunity, he removed the collections once more into the town. Linné left a memorandum begging that the herbarium should be kept from harm by mice or moths, that no naturalist should have a single specimen—valuable by itself, it would acquire added value by age, and he then gave the probable value of the various parts of his collections. But a loss had already taken place before the death of its possessor; the son in a letter of 1779 to Archiater Bäck, says:—"My late father weeded out his herbarium, while he was able to work, and seems to have burned all the duplicates, why, no one knows" (Fries, Linné, ii. p. 416, note). The terrible damage by mice is not now perceptible, for I only noticed two sheets which had been gnawed; the son must have withdrawn the damaged sheets, and amongst these may have been those I have had to note as missing, such as *Cupania* and *Sarracenia*.

COLLATERAL TYPE-COLLECTIONS.

There are other collections which may be looked upon as containing types of Linné's species, especially when his own herbarium is wanting in them, or they were acquired after the descriptions were published. The Martin-Burser herbarium at Uppsala is a case in point; in the Am. Acad. i. pp. 141-171 will be found descriptions of 250 plants, with Linnean names to fit those according to Caspar Bauhin's 'Pinax,' and several of them seem never to have been represented in Linné's herbarium at any time, such as *Poa Eragrostis*, *Anthoxanthum paniculatum*, *Allium*

sphærocephalum, *Senecio incannus* and *Ænanthe crocata*. Clifford's herbarium is now at the British Museum, having been bought by Banks, and is valued, as showing the originals of Linné's descriptions in his 'Hortus Cliffortianus.' Then, too, it is certain that he described many species of *Lichen* in the broad sense, from the Dillenian herbarium at Oxford. In the preface to the 'Species Plantarum,' ed. 2, we find him specifying the gardens which he has gone through: Paris, Oxford, Chelsea, Hartecamp, Leyden, Utrecht, Amsterdam, Upsala and others. From these he may have had a good supply of specimens, but very few of the list of herbaria following could have afforded so liberal a supply: Burser, Herman, Clifford, Burman, Oldenland (in Burman's possession), Gronovius, Royen, Sloane, Sherard, Bobart, Miller, Tournefort, Vaillant, Jussieu, Surian (St. Domingo plants in Jussieu's herbarium), Bäck, and Browne. Anything in these of special note must almost certainly have been described from those specimens.

In the year 1760 the younger Burman visited Linné at Uppsala, bringing with him his father's large collection of Cape plants, in which department the Dutch were supreme; many amongst these were new to science, and formed the types of such as were described by Linné on this occasion.

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In the following bibliography I have given my authorities for the statements made above with regard to the Linnean herbarium; its growth, and subsequent history. Although I have arranged the titles of the various theses according to the dates when they were sustained, yet for the sake of convenience in citation I have confined my references to Schreber's edition of the 'Amœnitates Academicæ,' Erlangæ, 1787-90, 10 vols. 8vo. I have not cited the 'Flora Suecica,' ed. 2, Stockholm 1755, throughout, for although I extracted nearly 30 additional names, I cannot assert that plants were sent to Linné as vouchers, or to add to his collection.

- 1745. *Plantæ Martino-Burserianæ*; *resp.* R. Martin. (Am. Acad. i. 141-171.)
- *Hortus Upsaliensis*, *resp.* S. Nacler. (Am. Acad. i. 197, 198.)
- 1748. *Hortus Upsaliensis*, tom. i. (et unic.) præf. p. [2].
- 1750. *Plantæ Camtschatcensenses rariores*, *resp.* J. P. Halenius. (Am. Acad. ii. 336-363.)
- 1751. *Novæ Plantarum genera*, *resp.* L. J. Chenon. (Am. Acad. iii. 8-25.)
- 1753. *Species Plantarum*, præf. p. 4 [-5].
- 1755. *Centuria prima plantarum*, *resp.* A. J. Juslenius. (Am. Acad. iv. 263-296.)

1756. *Centuria secunda plantarum, resp.* E. Torner. (Am. Acad. iv. 298-332.)
- *Flora palaestina, resp.* B. J. Strand. (Am. Acad. iv. 447-467.)
1757. *Buxbaumia. Resp.* A. R. Martin. (Am. Acad. v. 79-84.)
1758. *Systema Naturæ. Ed. X. Vol. i. præf. p.* [2].
1759. *Flora capensis. Resp.* C. H. Wännman. (Am. Acad. v. 357, 358.)
- *Flora jamaicensis. Resp.* C. G. Sandmark. (Am. Acad. v. 375-388.)
- *Pugillus jamaicensium plantarum. Resp.* G. Elmgren. (Am. Acad. v. 389-413.)
1762. *Species Plantarum. Ed. 2, præf. f. 4 verso, 5.*
1766. *Necessitas historiae naturalis Rossiae. Resp.* A. de Karamyschew. (Am. Acad. vii. 445-460; *Fl. sibirica, ib.* 460-465.)
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1771. *Mantissa plantarum altera (4) 143-588.*
1774. *Planta Cimicifuga. Resp.* J. Hornborg. (Am. Acad. viii. 193-204.)
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[The Swedish original was printed in 'Egenhändiga afteckningar af Carl Linnæus om sig sjelf,' printed by A. Afzelius at Stockholm, 1823. 4to.]
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1885. ÄHRLING, EWALD. *On Karl von Linné, Linné d.y., Linnean Society of London, Linnéska Institutet, Linnéska Samfundet, och Linnéska Samlingarna. (Afttryck ur Nordisk Familjebok.) Stockholm, 1885. 13 pp. 8vo.*

- [1903]. LINNÉ. Lefnadsteckning af Th. M. Fries. Stockholm [1903]. 2 vols., 8vo.
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EXPLANATION OF THE ABBREVIATIONS AND SIGNS
USED IN THE FOLLOWING PAGES.

Specific names printed in Roman type, as "*fastuosa*," show that a plant is so termed in the herbarium by Linné himself; if by an amanuensis and clearly under Linné's direction, that is indicated by the addition in parentheses of the name of the

amanuensis, as, for instance, under *ACALYPHA virgata* (m. Sol.) = manu Solandri, or the name on the sheet being in the handwriting of D. C. Solander, or (m. L. f.) where the handwriting is that of the younger Linné.

Specific names in *italic* type show that there is no specimen so named by Linné, but in cases where there can be no doubt as to the actual plant, I have added (pl.). Thus *ABRUS precatorius* is the only species, and is represented by a specimen, but does not show the name as written by Linné; sometimes the number from the 'Species Plantarum,' ed. 1. is put, but although there can be, in monotypic genera especially, no doubt as to the authenticity of such specimen, I have kept to my rule of not printing in Roman type, unless the name is written in full by Linné.

The numbers following the genera refer to the running numbers of the Catalogue of the Herbarium, as printed in Proc. Linn. Soc. 1906-7, pp. 96-112.

The numbers (1, 2, or 3) following the species refer to the enumeration in which they first occur, thus:—

In 1753 by the figure 1.

„ 1755 „ „ 2.

„ 1767 „ „ 3.

These lists are fully explained on pp. 8-9. Where no figure follows, the specimen was obtained after 1767, or was by some accident not recorded by Linné.

The same specimen was frequently shifted by Linné, as his views of affinity changed. I have tried to point out where a specimen may now be found, by adding the later name, as under *ACHYRANTHES repens* = *Illecebrum Achyrantha*, which means that the specimen is now in *ILLECEBRUM*. MS. names are shown by that abbreviation; when they were published in the 'Supplementum' which bears the name of the younger Linné as author, the abbreviation of "Suppl." has been affixed; this has the further interest of pointing out which species in that work are really due to the father and not to the son.

The types of the younger Linné in the herbarium are not as a rule indicated; they are left for another opportunity, as are also the zoological lists which were brought to light during the preparation of this Index. The numbers following the generic name in Clarendon type, refer to the Catalogue drawn up by David Don and Richard Kippist, when the Linnean Collections were acquired in 1830, after the death of Sir James Edward Smith; they are still used when consulting the Herbarium.

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LINNEAN HERBARIUM,

WITH

INDICATION OF THE LINNEAN TYPES.

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ADENANTHERA :—

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AEGINETIA :—

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cinnamomeus.
Clavus.
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crinitus.
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Georgii = *campestris* β
Georgii.
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 — var. *zeylanica*.
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 = *hyacinthoides*?

Uvaria.

ALISMA. 473.

- cordifolia*. 3. (m. Sol.)
Damasonium. 1.
flava.
natans. 1.
parnassifolia.
Plantago-aquatica. 1.
ranunculoides. 1.
subulata.

ALLAMANDA. 298.

- cathartica* (pl.).

ALLIONIA. 122.

- incarnata*.
violacea.

ALLIUM. 419.

- Ampeloprasum*.
angulosum. 1.
arenarium. 1.
ascalonicum. 3.
canadense.
carinatum.
Cepa.
Chamaemoly. "
descendens. 1.
fistulosum.
flavum. 3.

ALLIUM:—

- lineare*. 1.
magicum. 1.
Moly. 1.
moschatum.
nigrum. 3.
nutans. 1.
obliquum. 1.
odorum.
oleraceum. 1.
orientale. MS.
pallens. 3.
paniculatum. 3.
parviflorum. 3.
Porrum.
ramosum. 1.
roseum. 3.
rotundum.
sativum.
Schoenoprasum. 1.
Scorodoprasum. 1.
senescens. 1.
sibiricum = *Schoenoprasum*.
sphaerocephalon = *descendens*.
subhirsutum. 3.
tenuissimum. 1.
triquetrum. 3.
ursinum. 1.
veronense = *pallens*.
Victorialis. 1.
vineale.

ALLOPHYLUS. —

- zeylanicus*.

ALOË. 442.

- disticha*.
 — var. *plicatilis*.
hyacinthoides = *Aletris hyacinthoides*.
perfoliata. 1.
 — var. *humilis*.
 — var. *vera*.
pumila.
 — var. *arachnoidea*.
 — var. *margaritifera*.
retusa.
spiralis.

ALOË:—

Uvaria = Aletris Uvaria.
variegata.

— * *vera* = *perfoliata*

var. *vera*.

viscosa.

ALOPECURUS. 82.

agrestis. 3.

bulbosus.

geniculatus. 1.

hordeiformis. 1.

indicus = *Panicum alo-*

pecuroides.

monspeliensis. 1.

panicus. 3.

pratensis. 1.

ALPINIA. —

racemosa.

ALSINE. 388.

media. 1.

mucronata. 3.

segetalis. 1.

ALSTONIA, Mutis. 663.

ALSTROEMERIA. 444.

Ligtu.

Pelegrina. 3.

Salsilla.

ALTHAEA. 868.

cannabina. 1.

hirsuta. 1.

Ludwigii.

officinalis. 1.

ALYSSUM. 828.

alpestre.

Alyssoides.

calycinum. 3.

campestre. 3.

clypeatum. 3.

creticum. 1.

deltoideum. 3.

gemonense. 3.

halimifolium.

hyperboreum. 1.

incanum. 2.

minimum. 3.

montanum. 1.

saxatile. 1.

serpyllifolium. MS.

ALYSSUM:—

sinuatum. 3.

spinosum. 2.

utriculatum. 3.

Vesicaria.

AMARANTHUS. 1117.

albus. 3.

Blitum. 2.

caudatus. 1.

cruentus. 3.

deflexus.

flavus. 3.

gangeticus.

graecizans. 1.

hybridus. 1.

hypochondriacus. 1.

lividus.

mangostanus. 3.

melancholicus. 1.

oleraceus. 3.

paniculatus. 3.

polygamus. 3.

polygonoides. 3.

retroflexus. 1.

sanguineus. 3.

scandens. Suppl.

spinosus. 3.

tricolor. 1.

tristis.

viridis. 3.

AMARYLLIS. 416.

Atamasca = seq.

Atamasco.

Belladonna.

capensis.

ciliaris.

dubia.

formosissima. 1.

guttata.

longifolia.

lutea. 3.

orientalis.

reginae. 3.

sarniensis. (m. L. f.)

tenella. MS.

undulata. 3.

zeylanica = *Crinum zey-*

lanicum.

- AMBROSIA. 1114.**
 artemisifolia. 1.
 elatior. 1.
maritima.
 trifida. 1.
AMBROSINIA. 1078.
Bassii (pl.).
AMELLUS. 1023.
 fruticosus. MS.
 Lychnitis. 3.
 umbellatus. 3.
AMETHYSTEA. 37.
 caerulea. 1.
AMMANNIA. 156.
 baccifera. 1.
 latifolia. 1.
 octandra. Suppl.
 ramosior. 1.
AMMI. 341.
 copticum. 3.
glaucofolium.
 majus. 1.
AMOMUM. 3.
 Cardamomum. 1.
Granum-Paradisi.
 Zerumbet. 1.
 Zingiber. 1.
AMORPHA. 894.
 fruticosa. 1.
AMYGDALUS. 639.
 communis. 2.
 nana. 1.
 Persica. 1.
 pumila. 3.
AMYRIS. 490.
 balsamifera. 3. (m. Sol.)
 Elemifera. 3.
gileadensis.
maritima.
Opobalsamum.
Protium.
sylvatica.
toxicifera.
ANABASIS. 316.
 aphylla. 1.
 foliosa. 1.
 spinosissima. Suppl.
 tamariscifolia. 3.
- ANACARDIUM. 534.**
 occidentale. 3.
ANACYCLUS. 1015
aureus.
 creticus. 1.
 nobilis. MS. (=aureus,
fide Sm.)
orientalis.
 valentinus. 1.
ANAGALLIS. 208.
 arvensis. 1.
capensis.
 latifolia. 1.
 linifolia. 3.
 Monelli. 1.
 tenella.
ANAGYRIS. 523.
 foetida. 1.
ANASTATICA. 821.
 heirochuntica. 2.
 syriaca.
ANCHUSA. 182.
 angustifolia. 1.
 lanata. 3.
 officinalis. 1.
orientalis = *Lithospermum orientale.*
 sempervirens. 1.
 tinctoria.
 undulata. 1.
 virginiana.
virginica = *prae.*
ANDRACHNE. 1155.
 fruticosa. 1.
 Telephioides. 1.
ANDROMEDA. 563.
arborea.
 anastomosans. Suppl.
bryantha.
 caerulea. 1.
 calyculata. 1.
 Daboëcia. 3.
 droseroides.
 hypnoides. 1.
 mariana. 1.
 paniculata. 1.
 Polifolia. 1.
 racemosa. 1.

ANDROMEDA :—

tetragona. 1.

ANDROPOGON. 1211.

alopecuroides. 1.

barbatum.

bicorne. 1.

caricosum.

contortum.

cymbarium.

distachyon. 1.

divaricatum. 1.

fasciculatum. 1.

Gryllus. 3.

hirtum. 1.

insulare. 3.

Ischaemum. 1.

muticum.

Nardus.

nutans. 1.

pertusum = *Holcus pertusum*.

polydactylon. 3.

prostratum.

quadrivalve.

Ravennae.

Schoenanthus. 1.

squarrosum.

virginicum. 1.

ANDROSACE. 197.

carnea. 3.

elongata. 3.

Halleri = *carnea*.

lactea. 3.

maxima. 1.

septentrionalis. 1.

villosa. 1.

ANDRYALA. 956.

conyzoides. MS.

integrifolia.

lanata. 3.

ragusina. 3.

sinuata. 1. [= *integrifolia*.]

ANEMONE. 710.

apennina. 3.

alpina. 3.

baldensis.*canadensis*.

ANEMONE :—

capensis = *Atragene**capensis*.

coronaria. 1.

decapetala. 3.

dichotoma. 1.

fasciculata.

Hepatica. 1.

hortensis.

malvifolia = *palmata*.*narcissiflora*. 1.*nemorosa*. 1.*palmata*. 3.*patens*. 1.*pennsylvanica*.*philadelphus*. MS.*pratensis*. 1.*Pulsatilla*. 1.*quinquefolia*.*ranunculoides*. 1.*sibirica*. 1.*sulphurea*.*sylvestris*. 1.*thalictroides*. 1.*trifolia*. 3.*vernalis*. 1.*virginiana*. 1.

ANETHUM. 371.

Foeniculum. 1.*graveolens*. 1.*patulum*. MS.*segetum*.

ANGELICA. 354.

Archangelica. 3.*atropurpurea*. 3.*lucida*.*sylvestris*. 1.*verticillaris*. (m. Dahl).

ANGURIA. 1092.

lobata.*pedata*.*trifoliata*.*trilobata*.

ANONA. 708.

africana.*asiatica*.*discreta*.*glabra*.

ANONA :—

- hexapetala. Suppl.
 muricata.
 obscura.
 palustris.
 reticulata.
 squamosa.
 triloba. 3.

ANTHEMIS. 1016.

- afra*.
 alpina. 3.
 altissima. 1.
 americana. (m. L. f.)
 arabica. 1.
 arvensis. 1.
Bellidiasium = *Osmites*
Bellidiasium.
chia.
 Cota. 1.
 Cotula. 1.
cretica.
fruticosa.
italica.
leucantha = *Osmites leu-*
cantha.
 maritima. 1.
millefolia = *Chrysanthemum millefoliatum*.
mixta.
montana.
 nobilis. 1.
 peregrina.
 Pyrethrum. 1.
repanda.
 tinctoria. 1.
 — var. *Triumfetti*.
tomentosa. 3.
 valentina. 1.

ANTHERICUM. 432.

- alooides*.
 annuum.
 asphodeloides. 3.
 calyculatum. 1.
frutescens.
 graecum. 3.
hispidum.
 Liliago. 3.
 Liliastrium. 3.

ANTHERICUM :—

- ossifragum. 1.
 planifolium.
 ramosum. 1.
revolutum.
 serotinum. 3.
 spirale.
 undulatum [*Jacq.*].

ANTHISTIRIA. 74. [= *Pomereulla*, *Linn. f.*]

- equitans*. [= *P. Cornucopiae*, *Linn. f. fide Sm.*]

ANTHOCEROS. 1272.

- laevis.
multifidus.
punctatus.

ANTHOLYZA. 60.

- aethiopica. 3.
cephacea.
 Cunonia. 3.
maura.
 Meriana. 3.
Merianella.
Meriania = *Meriana*.
 ringens.

ANTHOSPERMUM. 1233.

- aethiopicum. 1.
 ciliare. 3.
 dioicum. (m. L. f.)
 = herbaceum, *Linn. f.*

ANTHOXANTHUM. 46.

- indicum*.
 odoratum. 1.
paniculatum.

ANTHYLLIS. 897.

- aspalathoides*.
 Barba-Jovis. 1.
 capensis. MS.
 cornicina. 1.
 cytisoides. 2.
 Erinacea. 1.
Gerardi.
Hermannia = seq.
Hermanniae. 1.
 heterophylla. 3.
involutrata.
linifolia.
 lotoides. 1.

ANTHYLLIS:—

- montana. 3.
- quinqueflora. Suppl.
- tetraphylla. 1.
- viscidiflora. Suppl.
- Vulneraria. 1.

ANTICHORUS. 487.

- depressus* (pl.).

ANTIDESMA. 1173.

- alexiteria. 1.

ANTIRRHINUM. 767.

- aegyptiacum.
- alpinum. 3.
- arvense. 1.
- Asarina. 1.
- bellidifolium. 1
- bicorne.
- bipunctatum. 1.
- canadense. 1.
- chalepense. 1.
- cirrhosum*.
- Cymbalaria. 1.
- dalmaticum. 1.
- Elatine. 1.
- genistaefolium. 1.
- glastifolium. MS.
- glaucum. 3.
- hastatum. MS.
- hirtum. 2.
- junceum. 3.
- Linaria. 1.
- var. Peloria.
- linarioides.
- linifolium. 3.
- majus. 1.
- minus. 1.
- molle. 1. = glaucum.
- monspessulanum. 1.
- multicaule. 1.
- origanifolium. 1.
- Orontium. 1.
- papilionaceum*.
- pedunculatum. 3.
- Pelisserianum. 1.
- pilosum.
- pinnatum. Suppl.
- purpureum. 1.
- reflexum. 3.

ANTIRRHINUM:—

- repens. 3.
- sabulosum*. MS. [*cf.*
Hemimeris sabulosa,
Suppl.]
- saxatile. 3.
- sparteum. 1. = jun-
ceum.
- spurium. 1.
- supinum. 3.
- triornithophorum. 1.
- triphyllum. 1.
- triste. 3.
- villosum*.
- viscosum. 3.

APHANES. 167.

- arvensis. 1.

APHYLLANTHES. 418.

- monspeliensis. 1.

APIUM. 374.

- graveolens. 1.
- Petroselinum. 3.

APLUDA. 1213.

- aristata. 3.
- mutica. 1.
- Zeugites. 3.

APOCYNUM. 309.

- androsaemifolium. 1.
- cannabinum. 1.
- frutescens. 3.
- minutum. Suppl.
- reticulatum.
- venetum. 3.

APO[NO]GETON. 479.

- distachyon. (m. L. f.)
- monostachyon. (m.
L. f.)

AQUARTIA [Jacq.]. —
aculeata [Jacq.].

AQUILEGIA. 699.

- alpina*.
- canadensis. 1.
- viscosa*.
- vulgaris. 1.

AQUILICIA. 279.

- sambucina* (pl.).

ARABIS. 842.

- alpina*. 1.

ARABIS :—

- bellidifolia [*Jacq.*].
- canadensis. 1.
- capensis = *Heliophila*
- integrifolia.
- grandiflora. 1.
- Halleri*.
- hispida.
- lyrata. 3.
- pendula. 1.
- Thaliana. 1.
- Turrita. 1.

ARACHIS. 909.

- hypogaea. 2.

ARALIA. 394.

- arborea. 3.
- chinensis. 1.
- nudicaulis. 1.
- racemosa. 1.
- spinosa. 1.

ARBUTUS. 566.

- acadiensis.
- alpina. 1.
- Andrachne*.
- Uuedo. 1.
- Uva-ursi. 1.

ARCTIUM. 964.

- Carduelis. 3.
- Lappa. 1.
- Personata. (m. L. f.)

ARCTOPUS. 1235.

- echinatus (pl.).

ARCTOTIS. 1036.

- acaulis.
- angustifolia.
- anthemoides. 3.
- aspera. 3.
- Calendula* = seq.
- calendulacea. 3.
- var. *coruscans*.
- var. *hypochondriaca*.
- var. *superba* =
- A. superba*.
- var. *tristis* =
- A. tristis*.
- dentata. 3.
- paleacea. 3.

ARCTOTIS :—

- paradoxa. 3.
- plantaginea*.
- radicans*.
- superba.
- tenuifolia.
- tristis*.

ARDUINA. 265.

- bispinosa. 3.

ARECA. —

- Cathecu*.
- oleracea*.

ARENARIA. 585.

- balearica*.
- bavarica. 3.
- biflora. 3.
- ciliata. 3.
- fasciculata.
- grandiflora. 3.
- gypsophiloides. 3.
- hispida. 2.
- juniperina. 3.
- laricifolia. 1.
- lateriflora. 1.
- liniflora.
- lucida. MS.
- media. 3.
- montana. 3.
- mucronata*.
- multicaulis*.
- peplodes. 1.
- rubra. 1.
- var. *campestris*.
- var. *marina*.
- saxatilis. 1.
- serpyllifolia. 1.
- striata. 3.
- tenuifolia. 1.
- teretifolia. MS.
- tetraquetra. 2.
- triflora.
- trinervia. 1.
- verna. 3.

ARETHUSA. 1059.

- bulbosa. 1.
- Burmanni. MS. [= *ciliaris*].
- capensis.

ARETHUSA :—

- ciliaris*. Suppl.
- divaricata*. 1.
- ophioglossoides*. 2.

ARETIA. 196.

- alpina*. 3.
- Halleri* = *Androsace*
carnea.
- helvetica*.
- Vitaliana*.

ARGEMONE. 670.

- armeniaca*.
- mexicana*. 1.
- pyrenaica*.

ARISTIDA. 98.

- Adscensionis*. 1.
- americana*. 3. (m. Sol.)
- arundinacea*.
- capensis*. MS.
- plumosa*. 3.

ARISTOLOCHIA. 1071.

- anguicida*.
- arborescens*.
- baetica*. 3.
- bilabiata*.
- bilobata*.
- caudata*.
- Clematitis*. 1.
- erecta*.
- hirsuta* = seq.
- hirta*.
- indica*. 1. (m. Sol.)
- longa*. 1.
- maurorum*.
- maxima*.
- odoratissima*.
- peltata*.
- pentandra*.
- Pistolochia*. 1.
- rotunda*. 1.
- sempervirens*. 1.
- Serpentaria*. 1.
- trilobata*. 3.

ARNICA. 1001.

- caffra*.
- coronopifolia*.
- crocea*. 3.
- Gerbera*. 3.

ARNICA :—

- maritima*.
- montana*. 3.
- var. *alpina*.
- piloselloides*. (m. L. f.)
- scorpioides*. 3.

ARTEDIA. 339.

- muricata* = *Daucus* *muri-*
catus.
- squamata*. 2.

ARTEMISIA. 988.

- Abrotanum*. 3.
- Absinthium*. 1.
- aethiopica*. 1.
- ambigua*.
- annua*. 1.
- arborescens*. 3.
- caerulescens*.
- campestris*. 1.
- chinensis*. 2.
- Contra*.
- crithmifolia*. 2.
- Dracunculus*. 2.
- dubia*. MS.
- glacialis*. 3.
- integrifolia*. 1.
- judaica*. 3.
- maderaspataana*. 2.
- maritima*. 1.
- minima*. 2.
- nilotica* = *Cotula* *authe-*
moides.
- palsætina*.
- palustris*. 1.
- pontica*. 1.
- rupestris*. 1.
- Santonicum*. 1.
- tanacetifolia*. 1.
- vermiculata*.
- vulgaris*. 1.

ARTOCARPUS. 1087.

- lobatus*. (m. L. f.)

ARUM. 1079.

- arborescens*.
- Arisarum*. 1.
- auritum*. 3. (m. Sol.)
- cannifolium*.
- Colocasia*. 1.

ARUM:—

- divaricatum. 3.
- Dracontium. 3.
- Dracunculus*.
- esculentum.
- hederaceum. 3.
- lingulatum. 3.
- macrorrhizon*.
- maculatum. 1.
- novum* [= *cannifolium*].
- ovatum. 1.
- pentaphyllum*.
- peregrinum*.
- proboscideum*.
- sagittaeifolium*.
- Sequinum*.
- tenuifolium*.
- trilobatum*.
- triphyllum. 1.
- virginicum*.

ARUNDO. 97.

- arenaria. 1.
- Bambos. 1.
- Calamagrostis. 1.
- Donax. 1.
- epigeios. 1.
- Phragmites. 1.
- scriptoria* = A. Donax.

ASARUM. 608.

- canadense. 1.
- europaeum. 1.
- Hypocistis* = *Cytinus*
- Hypocistis*.
- virginicum*.

ASCLEPIAS. 310.

- amoena*.
- arborescens*.
- barbata. MS. (*cf.* undulata).
- carnosa. Suppl.
- crispa.
- curassavica. 4.
- decumbens*.
- dilatata. MS.
- exaltata* = *syriaca*.
- fruticosa. 1.
- gigantea. 1.
- Gutta.

ASCLEPIAS:—

- incarnata. 1.
- lactifera*.
- nigra. 1.
- nivea. 1.
- pubescens.
- purpurascens. 3.
- rubra*.
- sibirica. 1.
- syriaca*. 1. (m. L. f.)
- var. *exaltata*.
- tuberosa. 1.
- undulata.
- variegata*.
- verticillata. 1.
- villosa, sphalm. = pubescens.
- Vincetoxicum. 1.

ASCYRUM. 944.

- Crux-Andraee.
- Hypericoides ["angustifolium"].
- villosum*.

ASPALATHUS. 893.

- albens.
- anthylloides. 3.
- araneosa. 3.
- argentea.
- asparagoides. Suppl.
- astroites*.
- callosa.
- canescens.
- capitata.
- carnosa, *Berg.* = *thymifolia*.
- carnosa.
- chenopoda. 3.
- ciliaris.
- cretica*.
- Ebenus.
- ericifolia. 3.
- galioides, *Berg.* = *levigata*.
- galioides.
- genistoides.
- indica*.
- laxata*.
- laevigata. MS.

ASPALATHUS :—

- lotoides. MS.
- mucronata. Suppl.
- nigra.
- orientalis.
- pilosa.
- pinnata.
- quinquefolia.
- retroflexa.
- spinosa. 3.
- thymifolia.
- tridentata.
- uniflora.
- verrucosa. 3.

ASPARAGUS. 434.

- acutifolius. 1.
- aethiopicus.
- albus. 1.
- aphyllus. 1.
- asiaticus.
- capensis. 3.
- declinatus.
- Draco = Dracaena
- Draco.
- falcatus. 3.
- graminifolius = Dracaena graminifolia.
- horridus.
- officinalis. 1.
- var. *altilis*.
- var. *maritimus*.
- retrofractus. 1.
- sarmentosus.
- tenuissimus.
- terminalis.
- verticillatus.

ASPERUGO. 189.

- aegyptiaca. 3.
- procumbens.

ASPERULA. 127.

- arvensis. 1.
- crassifolia. 3.
- cynanchica. 1.
- laevigata. 3.
- odorata. 1.
- pyrenaica. 3.
- rotundifolia.
- taurina. 1.
- tinctoria. 1.

✓ ASPHODELUS. 431.

- capensis.
- fistulosus. 1. (pl.)
- luteus. 3.
- ramosus. 1.

ASPLENIUM. 1250.

- Adiantum-nigrum. 3.
- bifolium.
- capense.
- Ceterach. 3.
- cultrifolium.
- dentatum = A. Trichomanes-dentatum.
- erosum. 3.
- Hemionitis. 1.
- marginatum.
- marinum. 3.
- monanthemum. 3.
- monanthes = præc.
- Nidus. 1.
- nodosum.
- obtusifolium.
- Onopteris = A. Adiantum-nigrum.
- plantagineum. 3.
- plantaginifolium = præc.
- pygmaeum. 3.
- radicans.
- rhizophorum. 3.
- rhizophyllum. 2.
- Rhizophylla = præc.
- Ruta-muraria. 1.
- salicifolium. 1.
- Scolopendrium. 1.
- serratum. 3.
- squamosum.
- striatum. 3.
- Trichomanes. 1.
- Trichomanes-dentatum.
- Trichomanes-ramosum.
- trichomanoides = A. Trichomanes.

ASTER. 997.

- acris. 3.
- alpinus. 3.
- Amellus. 1.
- annuus. 1.
- aurantius.
- chinensis. 1.

ASTER :—

- concolor. 1.
 cordifolius. 1.
 crinitus. 3.
 divaricatus. 1.
 dumosus. 1.
 ericoides. 3.
 fruticosus. 1.
fruticulosus = *praec.*?
 grandiflorus. 3.
 hyssopifolius. 3.
 indicus. 3.
 laevis. 3.
 linariifolius. 1.
 linifolius. 1.
 macrophyllus. 3.
miser.
mutabilis. 1.
 Novae-Angliae. 1.
 Novi-Belgii. 1.
 odoratus. MS.
oppositifolius.
 polifolius. 3.
 puniceus. 1.
 reflexus. 3.
rigidus.
sedifolius = *acris.*
 sibiricus. 1.
 tardiflorus. 3.
 tataricus. Suppl.
 taxifolius.
 tenellus. 3.
 tenuifolius. 1.
 Tradescanti. 1.
 Tripolium. 1.
 undulatus. 1.
vernus.
zephyrinus = *poli-*
folius.

ASTRAGALUS. 926.

- alopecuroides. 1.
 alpinus. 1.
 arenarius. 1.
 austriacus. 3.
 baeticus. 1.
biflorus = *Crotalaria*
biflora.
 campestris. 1.
 canadensis. 1.

ASTRAGALUS :—

- capitatus.*
caprinus.
carolinianus.
 chinensis. 3.
 Christianus. 1.
 Cicer. 1.
 contortuplicatus. 1.
 depressus. 3.
 epiglottis. 1.
exscapus.
 galegiformis. 2.
 Glaux. 1.
 glycyphyllos. 1.
grandiflorus = *Hedy-*
sarum argenteum.
 hamosus. 1.
hedysaroides = *Hedy-*
sarum obscurum.
hypoglottis.
 incanus. 3.
 melilotoides. MS.
 microphyllus. 1.
 monspessulanus. 1.
montanus.
 Onobrychis. 1.
pentaglottis.
physodes.
 pilosus. 1.
 sesameus. 1.
 sinicus. 3.
Stella = *seq.*
 stellatus [*Gouan*].
 sulcatus. 1.
 syriacus. 1.
 tenuifolius. 3.
 Tragacantha. 1.
 tragacanthoides. 1.
tragoides.
 trimestris. 1.
 uliginosus. 1.
 uncatus. 3.
 uralensis. 1.
 verticillaris. (m. L. f.)
vesicarius.
- ASTRANTIA. 334.
 ciliaris. Suppl.
 major. 2.
 minor.

- ASTRONIUM** [Jacq.].
graveolens [Jacq.].
ATHAMANTA. 345.
annua.
Cervaria. 3.
chinensis. 1.
condensata. 3.
cretensis. 3.
Libanotis. 1.
Meum = *Aethusa Meum.*
Oreoselinum. 1.
sibirica. 1.
sicula. 3.
ATHANASIA. 986.
annua. 3.
canescens = *pubescens.*
capitata.
crenata.
crithmifolia.
dentata.
genistifolia. 3.
laevigata = *dentata.*
maritima. 3.
parviflora.
pubescens. 3.
squarrosa. 3.
trifurcata. 3.
ATRACTYLIS. 971.
cancellata. 1.
ciliaris.
fruticosa.
gummifera. 1.
humilis. 1.
oppositifolia.
spinosissima. MS.
ATRAGENE. 711.
alpina. 1.
capensis. 3.
sibirica cf. *alpina.*
zeylanica.
ATRAPHAXIS. 462.
Polygonum. MS.
spinosa. 1.
undulata. 1.
ATRIPLEX. 1221.
glauca.
Halimus. 1.
hastata. 1.
- ATRIPLEX.**—
hortensis. 1.
laciniata. 1.
littoralis. 1.
marina.
patula. 1.
pedunculata. 2.
portulacoides. 1.
rosea.
sibirica. 3.
tatarica. 1.
ATROPA. 246.
arborescens.
Belladonna. 1.
frutescens. 1.
guineense. MS.
Mandragora. 3.
physalodes. 1.
solanacea = *guineense.*
AVENA. 95.
bromoides. 3.
elatior. 1.
fatua. 1.
flavescens. 3.
fragilis. 1.
hispida. Suppl.
Loeflingiana. 1.
nitens. MS. (an m.
 Sol.?)
nodosa.
nuda. 2.
pennsylvanica. 1.
ponderosa. MS.
pratensis. 1.
pubescens. 3.
sativa. 1.
sesquitertia. 3.
sibirica. 1.
spicata. 1.
sterilis. 3.
stipiformis.
AVERRHOA. 592.
acida.
Bilimbi. 3.
Cerambola.
AVICENNIA. 813.
nitida [Jacq.].
officinalis (pl.).

AVICENNIA :—

tomentosa [Jacq.] = officinalis.

AXYRIS. 1101.

Amaranthoides. 1.
Ceratoides. 1.
hybrida. 1.
prostrata. 1.

AYENIA. 1069.

magna. 3.
pusilla. 3.
tomentosa.

AZALEA. 215.

indica. 3.
lapponica. 1.
lutea = *nudiflora*.
nudiflora. 3.
pontica = *Rhododendron ponticum*.
procumbens. 1.
viscosa. 1.

BACCHARIS. 992.

arborea.
brasiliانا.
Dioscoridis. 3.
foetida.
halimifolia. 1.
indica. 1.
ivaefolia. 1.
neriifolia. 1.
tenuifolia = *Chrysocoma scabra*.

BAECKEA. 505.

frutescens. 1.

BALLOTA. 737.

alba. 3.
disticha. 3.
lanata. 1.
nigra. 1.
suaveolens. 3.

BALTIMORA. —

recta.

BANISTERIA. 589.

angulosa.
benghalensis. 3.
brachiata.

BANISTERIA :—

dichotoma.
fulgens. 3. (m. Sol.)
laurifolia.
lupuloides = *Gouania domingensis*.
purpurea.

BARLERIA. 805.

buxifolia.
coccinea.
cristata. 1.
Hystrix. 3.
longifolia. 3. (m. L. f.)
Prionitis. 1.
sericea. MS.
solanifolia.

BARNADESIA [Mutis, 1778].

972.

spinosa, Linn. f.

BARRINGTONIA [Forst.]. 864.

speciosa [Forst.].

BARRERIA. —

capensis = *Diosma capensis*.

BARTRAMIA. —

indica = *Triumfetta Bartramia*.

BARTSIA. 756.

alpina. 1.
coccinea. 1.
pallida. 3.
Trixago = *Rhinanthus Trixago*.
viscosa.

BASELLA. 390.

alba.
lucida.
rubra.

BASSIA. 610.

Illipe. MS.
longifolia.

BATIS. —

americana, sphalm. = *Trophis americana*.
maritima.

BAUHINIA. 525.

aculeata. 1.
acuminata. 1.

BAUHINIA :—

divaricata.
purpurea. 3.
scandens.
tomentosa.
ungulata.
variegata. 1.

BEFARIA. 613.

acutans (pl.).

BEGONIA. 1125.

capensis. Suppl.
ferruginea. Suppl.
obliqua. 3.

BELLIS. 1006.

annua. 1.
perennis. 1.
 — var. *hortensis*.

BELLUM. 1007.

bellidioides.
minutum = *Pectis*
minuta.

BELLONIA. —

aspera.

BERBERIS. 453.

cretica. 3.
vulgaris. 2.

BERGERA. 548.

Koenigii (pl.).

BERGIA. 597.

capensis.

BERLINIA [Sol.]. 530 a.

guineensis.

BESLERIA. 771.

cristata = *Drupina cris-*
tata.

lutea.

melittifolia. (m. L. f.)

BETA. 314.

Cicla.

maritima.

vulgaris.

— var. *Cicla*.

— var. *perennis*.

— var. *rubra*.

BETONICA. 735.

Alopecuros. 1.

annua. 1.

— var. *glabra* =
Stachys annua.

BETONICA :—

annua var. *hirsuta* =

præc.

heraclea. 3.

hirsuta.

hirta.

officinalis. 3.

orientalis.

BETULA. 1109.

alba. 3.

Alnus. 3.

— var. *glutinosa*.

— var. *incana*.

excelsa. (m. Dahl) MS.

lenta. 1.

nana. 1.

nigra. 1.

pumila. 3.

pyrifolia. (m. Dahl)
 MS.

BIDENS. 975.

apiifolia = *Anthemis*
americana.

atriplicifolia = *Spilan-*
thes atriplicifolius.

bipinnata. 3.

bullata. 1.

cernua. 1.

frondosa. 1.

fruticosa.

minima.

nivea. 1.

nodiflora. 3.

pilosa. 1.

— var. *chinensis*.

scandens.

tenella. 3.

tripartita. 1.

verticillata.

BIGONIA. 776.

aequinotialis.

caerulea.

capreolata. 1.

Catalpa. 3.

crucigera.

dubia.

indica. 3.

Leucoxydon. 1.

paniculata.

BIGNONIA :—

pentaphylla.
peruviana.
pubescens.
radiata.
radicans. 1.
sempervirens.
stans.
triphylla.
Unguis-cati.

BISCUTELLA. 831.

apula = *didyma.*
auriculata. 1.
coronopifolia.
didyma. 1.
laevigata.
lyrata.
sempervirens.

BISERRULA. 927.

Pelecinus. 1.

BIXA. 674.

Orellana (pl.).

BLAERIA. 141.

articulata.
ciliaris. Suppl.
ericoides.
pusilla. 3.

BLAKEA. 612.

trinervia. 3.
triplinervia.

BLASIA. 1270.

pusilla. 1.

BLECHNUM. 1247.

australe. 3.
occidentale. 3.
orientale.
radicans.
virginicum.

BLITUM. 14.

capitatum. 1.
chenopodioides.
tataricum. MS.
virgatum. 1.

BOBARTIA. —

indica.

BOCCONIA. 609.

frutescens. 1.

BOERHAVIA. 9.

angustifolia. 3.

BOERHAVIA :—

diandra. 3.
diffusa. 1.
erecta.
hirsuta.
pubescens = *diffusa.*
repens. 3.
scandens. 3.

BOLETUS. 1280.

bovinus.
Favus.
fomentarius.
granulatus.
igniarius.
luteus.
perennis. (m. Ehrh.)
sanguineus.
suaveolens.
suberosus.
subsquamosus.
subtomentosus.
versicolor.
viscidus.

BOMBAX. —

aculeatum = *B. Ceiba.*
Ceiba.
gossypinum.
heptaphyllum.
inermis = seq.
pentandrum.
religiosum = *gossypinum.*

BONTIA. 812.

daphnoides. 2.
germinans = *Avicennia*
officinalis.

BORAGO. 188.

africana. 3.
indica. 1.
officinalis. 1.
orientalis. 3.
zeylanica.

BORASSUS. —

flabellifer.

BORBONIA. 890.

cordata. 3.
crenata.
ericifolia.
laevigata. 3.
lanceolata. (m. L. f.)

BORBONIA :—

tomentosa. 3.

trinervia.

BORRAGO v. BORAGO.

BOSEA. 320.

Yervamora. 3.

BRABEJUM. 1223.

stellatifolium (pl.).*stellulifolium* = *præc.*

BRABYLA. —

capensis = *Brabejum**stellatifolium*.

BRASSICA. 844.

alpina. 3.*arvensis*. 3.*campestris*. 3.*chinensis*. 3.*Eruca*. 1.*Erucastrum*. 1.*Napus*. 3.*oleracea*.— var. *botrytis*.— var. *capitata*.— var. *gongylodes*.— var. *laciniata*.— var. *Napobrassica*.— var. *rubra*.— var. *sabauda*.— var. *sabellica*.— var. *selenisia*.— var. *sylvestris*.— var. *viridis*.*orientalis*. 1.*Rapa*.*vesicaria*. 1.*violacea*. 3.

BRATHYS. 702.

juniperina.

BREYNIA. —

indica = *Capparis**Breynia*.

BRIZA. 88.

anceps. MS.*bipinnata*.*Eragrostis*. 1.*maxima*. 1.*media*. 1.*minor*. 2.

BRIZA :—

virens. 3.

BROMELIA. —

Acanga.*Ananas*.*humilis*.*Karatas*.*ligulata*.*nudicaulis*.*Pinguin*.

BROMUS. 93.

arvensis. 1.*ciliatus*.*cristatus*. 1.*distachyos*. 3.*geniculatus*. 3.*giganteus*. 1.*hordeaceus*.*inermis*.*madritensis*. 3.*mollis*. 3.*pinnatus*. 1.*purgans*. 1.*racemosus*.*ramosus*.*rigens*. 3.*rubens*. 2.*scoparius*. 2.*secalinus*. 1.*squarrosus*. 1.*sterilis*. 3.*stipoides*.*tectorum*. 1.*triflorus*.

BROSSAEA [Plum.].

coccinea.

BROWALLIA. 791.

alienata.*americana* = *demissa*.*demissa*. 3.*elata*. 3.

BROWNEA. 859.

coccinea (pl.).

BRUNFELSIA [Plum.]. 257.

americana. 3.

BRUNIA. 271.

abrotanoides.*ciliata*.

BRUNIA:—

- cupressina* = *Diosma*
cupressina.
glutinosa. (m. L. f.)
lanuginosa. 1.
Levisanus = *Protea* *Levi-*
sanus.
nodiflora. 1.
paleacea.
radiata.
uniflora = *Diosma* *cu-*
pressina.

BRUNSFELSIA, vide BRUNFELSIA.

BRYONIA. 1153.

- africana*. 1.
alba. 1.
cordifolia. 1.
cretica.
grandis. 3.
laciniosa. 1.
palmata.
scabrella. Suppl.

BRYUM. 1265.

- aciculare*. (m. am. ?)
aestivum.
albidum.
alpinum.
apocarpum.
argenteum.
*caespiticiu*m. 1.
capillare.
carneum.
Celsii.
*cirrhatu*m. MS. (ap.
Hypnum.)
extinctorium.
*flexuosu*m.
glaucum.
*heteromallu*m.
hypnoides. 1.
imberbe.
murale.
*paludosu*m.
palustre.
*pellucidu*m.
pomiforme.
*pulvinatu*m. (m. Ehrh.)

BRYUM:—

- pyriforme*. (m. Ehrh.)
rubrum.
rurale. 1.
scoparium.
simplex.
*squarrosu*m. (m. L. f.
& Ehrh.)
*striatu*m.
*subulatu*m. (m. L. f.)
*tortuosu*m. (ap. Hyp-
num.)
trichodes.
*truncatulu*m. 1.
*undulatu*m. (m. Ehrh.)
*unguiculatu*m.
*verticillatu*m.
*viridulu*m. 2.

BUBON. 357.

- Galbanu*m. 3.
*gummiferu*m.
*macedonicu*m. 1.
rigidius.

BUCEPHALON. —

- racemosu*m = *Trophis*
americana.

BUCHNERA. 790.

- aethiopica*. (cf. *Manulea*.)
africana = *Rhinanthus*
capensis.
americana. 1.
asiatica. 1.
canadensis. 3.
capensis. 3.
cernua.
divaricata. (m. L. f.)
laciniata.
linifolia. MS.

BUCCIDA. 556.

- Buceras*. 3.

BUDDLEJA. 142.

- americana*. 3.
occidentalis.
virgata. Suppl.

BUFONIA. 168.

- tenuifolia*. 1.

BULBOCODIUM. 417.

- serotinu*m.

BULBOCODIUM :—
vernum. 1.

BUNIAS. 847.
aegyptiaca.
balearica. 3.
Cakile. 1.
cornuta. 1.
Erucago. 1.
myagroides.
orientalis. 1.
sibirica.
spinosa.

BUNIUM. 342.
aromaticum.
Bulbocastanum. 1.

BUPHTHALMUM. 1022.
aquaticum. 1.
arborescens. 3.
capense = Oedera pro-
lifera.
durum.
frutescens. 1.
grandiflorum. 1.
helianthoides. 1.
maritimum. 1.
salicifolium.
speciosissimum. 3.
spinosum. 1.

BUPLEURUM. 335.
angulosum. 1
difforme. 3.
falcatum. 3.
frutescens. 2.
fruticosum. 1.
junceum. 3.
longifolium. 1.
Odontites. 1.
petraeum.
ranunculoides. 3.
rigidum. 1.
rotundifolium. 1.
semidecompositum. 2.
stellatum. 1.
tenuissimum. 1.
villosum.

BURMANNIA. 404.
biflora.
disticha. 1.

BURSERA [Jacq.].

BURSERA :—

gummifera. 3.

BUTOMUS. 521.

umbellatus. 1. (pl.).

BUTTNERIA, vide BYTTNERIA.

BUXBAUMIA. 1259.

aphylla. 3.

BUXUS. 1110.

sempervirens. 1.

— var. *arborescens*.

— var. *suffruticosa*.

BYSSUS. 1278.

antiquitatis.

aurea. (m. L. f.)

botryoides. (m. Ehrh.)

cancellata.

candelaris. (m. L. f.)

cryptarum.

Flos-aquae.

incana. (m. Ehrh.)

Iolithus.

lactea. (m. L. f.)

phosphorea. 1. (m. L. f.?)

saxatilis. 2.

septica.

velutina.

BYTTNERIA. 266.

microphylla. (m. Jacq.)

scabra.

CACALIA. 976.

adscendens. MS.

alpina. (m. L. f.)

Anteuphorbium.

atriplicifolia. 1.

cuneifolia.

Ericoides.

fruticosa. MS. [v. infrà.]

hastata. 1.

incana.

Kleinia. 1.

lyrata. MS.

papillaris.

pinnata [= pinnatifida].

Porophyllum. 1.

repens.

sarracenica. 3.

sonchifolia. 1.

suaveolens. 1.

CACALIA :—

suffruticosa. 3. [fruticosa.]

CACHRYS. 349.

Libanotis.
sicula. 3.

CACTUS. 633.

cochenillifer.
curassavicus.
Epidendrum.
Ficus-indica.
flagelliformis. 1.
grandiflorus. 1.
heptagonus.
hexagonus.
lanuginosus.
mammillaris.
Melocactus.
moniliformis.
nobilis.
Opuntia. 3.
parasiticus. 3.
pentagonus.
Pereskia.
peruvianus.
Phyllanthus. 3.
Pitaiaya.
portulacifolius.
repandus.
Royeni.
tetragonus.
triangularis.
Tuna.

CAESALPINIA. 530.

brasiliensis.
Crista.
Sappan.
vesicaria. 2.

CALAMUS. —

Rotang.

CALCEOLARIA. 32.

integrifolia.
pinnata.

CALEA. 984.

Amellus. 3. (m. Sol.)
jamaicensis. 3. (m. Sol.)
oppositifolia. 3. (m. Sol.)
Scoparia. (m. Sol.)

CALENDULA. 1035.

CALENDULA :—

arvensis. 3.
fruticosa. 3.
graminifolia. 1.
hybrida. 1.
nudicaulis.
officinalis. 1.
pluvialis. 1.
sancta. 3.

CALLA. 1081.

aethiopica. 3.
orientalis.
palustris. 3.

CALLICARPA. 136.

americana. 1.
cana.
integrifolia.
lanata.
tomentosa.

CALLIGONUM. —

Polygonoides.

CALLISIA. 66.

repens (pl.).

CALLITRICHE. 13.

androgyna = *verna.*
autumnalis.
hermaphroditica =
autumnalis.
palustris. 1.
—— var. *bifida* =
autumnalis.
—— var. *minima* =
verna.
—— var. *natans* =
verna.

CALOPHYLLUM. 676.

Calaba. 3.
Inophyllum. 1.

CALTHA. 719.

palustris. 2.

CALYCANTHUS. 660.

floridus. 3.
praecox.

CAMBOGIA. 671.

Gutta = *Asclepias*
Gutta.

CAMELLIA. 878.

japonica. 1.

CAMERARIA. 303.

*angustifolia.**latifolia.* 3.

CAMPANULA. 221.

alpina. 3.*Alpini.**americana.* 3.*barbata.* 3.*bononiensis.**canariensis* = Canarina

Campanula.

*capensis.**carpatica* [Jacq.].*cenisia.* 3.*Cervicaria.* 1.*cinerea.* Suppl.*decurrens* = patula.*dichotoma.* 3.*Elatines.* 3.*erinoides.* 3.*Erinus.* 1.*fruticosa.**glomerata.* 1.*graminifolia.* 3.*hederacea.* 1.*heterophylla.**hispidula.* Suppl.*hybrida.* 1.*laciniata.* 3.*latifolia.* 1.*lilifolia.* 1.*limonia* = seq.*limonifolia.**lobelioides.* Suppl.*lusitanica.**Medium.* 1.*mollis.* 3.*patula.**peltatus.**Pentagonia.**peregrina.**perfoliata.* 1.*persicifolia.* 1.*petraea.* 3.*porosa.* Suppl.*portensis.**pulla.* 3.*pyramidalis.* 1.

CAMPANULA :—

rapunculoides. 3.*Rapunculus.* 1.*rhomboidalis.* 2.*rhomboidea* = præc.*rotundifolia.* 1.*saxatilis.**sibirica.* 1.*Speculum-♀.* 1.*spicata.**stricta.* 3.*thyrsoides* = seq.*thyrsoides.**Trachelium.* 1.*tridentata.* 3.*uniflora.* 1.*undulata.* Suppl.*unidentata.* Suppl. (an
m. L. f. ?).

CAMPHOROSMA. 165.

acuta. 1.*glabra.* 3.*monspeliaca.* 1.*monspeliensis* = præc.

CANARINA. 456.

Campanula.

CANARIUM. 1172.

commune. 3. (pl.)

CANNA. 1.

angustifolia. 3.*glauc.* 1.*indica.* 1.*latifolia.*

CANNABIS. 1177.

sativa. 1.

CAPPARIS. 664.

Baducca. 3.*Breynia.**Cynophallophora.**ferruginea.* 3.*flexuosa.* 3.*frondosa.**hastata.**linearis.**pulcherrima.**sepjaria.* 3.*siliquosa.* 3.*spinosa.* 1.

CAPPARIS :—

zeylanica.

CAPRARIA. 785.

biflora. 1.*crustacea.**durantifolia.* 3.*gratioloides* = *Lindernia**pyxidaria.*

CAPSICUM. 249.

annuum. 1.*baccatum.* 3.*frutescens.* 1.*grossum.*

CAPURA. 454.

purpurata (pl.).

CARDAMINE. 835.

*africana.**amara.* 1.*asarifolia.* 3.*bellidifolia.* 1.*Chelidonia.* 1.*graeca.* 3.*hirsuta.* 1.*impatiens.* 1.*Lunaria.**nudicaulis.* 1.*parviflora.* 3.*petraea.* 1.*pratensis.* 1.*resedifolia.* 3.*trifolia.* 1.*virginica.* 1.

CARDIOSPERMUM. 513.

*Corindum.**Halicacabum.* (m. Sol.)

CARDEUS. 966.

acanthoides. 3.*Acarua* = *Cnicus**Acarua.**acaulis.* 3.*altissimus.**argentatus.**canus.* 3.*Casabonae.* 3.*centauroides* = *Cnicus**centauroides.**crispus.* 1.*cyanoides.* 3.

CARDEUS :—

cyanoides var. *monoclonos.*— var. *polyclonos.**defloratus.* 3.*eriphorus.* 2.— var. *spurius.**flavescens.* 3.*helenioides.* 1.*heterophyllus.* 3.*lanceolatus.* 1.*leucographus.**Marianus.* 3.*mollis.* 3.*monspessulanus.**nutans.* 1.*palustris.* 1.*parviflorus.**pectinatus.**polyanthemus.* 3.*pycnocephalus.* 3.*serratuloides.* 1.*stellatus.* 3.*syriacus.* 1.*tataricus.* 1.*tuberosus.* 1.*virginianus.*

CAREX. 1100.

acuta. 1.— var. *nigra.*— var. *rufa.**arenaria.* 1.*atrata.* 1.*axillaris.**baldensis.* 3.*brizoides.* 2.*caespitosa.* 1.*canescens.* 1.*capillaris.* 1.*capitata.* 3.*Caricis.* MS.*cyperoides.**digitata.* 1.*dioica.* 1.*distans.**elongata.* 1.*filiformis.* 3.*flava.* 1.*folliculata.* 1.

e *

CAREX :—

- globularis. 1. ("globu-
lifer"). —
- hirta*.
- indica.
- leporina. 3.
- limosa. 1.
- lithosperma. 3.
- loliacea. 1.
- montana. 1.
- muricata. 1.
- pallescens. 1.
- panicea. 1.
- paniculata. 2.
- pedata*.
- pilulifera. 3.
- Pseudocyperus. 1.
- pulicaris. 1.
- remota. 2.
- saxatilis. 1.
- squarrosa. 1.
- tomentosa*.
- uliginosa. 1.
- vesicaria. 1.
- vulpina. 1.

CARICA. 1190.

- Papaya. 1.
- Posoposa*.

CARISSA. 295.

- Carandas. 3.
- spinarum.

CARLINA. 970.

- acaulis. 1.
- atractyloides.
- corymbosa. 1.
- lanata. 2.
- pyrenaica.
- racemosa. 1.
- vulgaris. 1.

CAROLINEA. 865. Suppl.

- Lovisa-Carolina, MS.
- [=C. princeps, L. f.]

CARPESIMUM. 991.

- abrotanoides. 1.
- cernuum. 1.

CARPINUS. 1131.

- Betulus. 1.
- Ostrya. 1.

CARTHAMUS. 973.

- arborescens*.
- caeruleus. 3.
- Carduncellus*.
- corymbosus*.
- creticus. 3.
- lanatus. 1.
- mitissimus*.
- tinctorius. 1.
- tingitanus. 3.

CARUM. 372.

- Bunius* = Aethusa
- Bunius.
- Carvi. 2.
- peregrinum*.

CARYOCAR. —

- nuciferum*.

CARYOPHYLLUS. 686.

- aromaticus. 3.

CARYOTA. —

- urens*.

CASSIA. 528.

- Absus. 3.
- alata. 3.
- atomaria.
- auriculata*.
- bicapsularis. 1.
- biflora. 3.
- Chamaecrista. 1.
- diphylla. 1.
- emarginata*.
- falcata. 3.
- Fistula. 3.
- flexuosa*.
- galegifolia*.
- glandulosa. 3. (m. Sol.)
- hirsuta*.
- javanica.
- ligustrina. 1.
- marilandica. 1.
- mimoscides*.
- nietitans. 1.
- obtusifolia. 3.
- occidentalis. 3. (m.
Sol.)
- pilosa. 3. (m. Sol.)
- planisiliqua. 1.
- procumbens. 3.

CASSIA :—

- Senna. 3.
 serpens. 3. (m. Sol.)
 Sophora. 1.
 Tagera. 3.
tenuissima.
 Tora. 1. (m. Sol.)
 viminea. 3. (m. Sol.)

CASSINE. 380.

- barba* = seq.
 barbara.
 capensis.
 Maurocenia. 1.
 Peragua. 1.

CASSYTHA. 519.

- corniculata*.
filiformis (pl.).

CASTILLEJA. 757.

- Mutisii. MS.

CASUARINA. 1090.

- equisetifolia*.

CATANANCHE. 961.

- caerulea*. 3.
graeca.
lutea. 1.

CATESBAEA. —

- spinosa* (pl.).

CATURUS. 1163.

- ramiflorus*.
spiciflorus. 3.

CAUCALIS. 338.

- daucoides*. 1.
grandiflora. 1.
latifolia. 3.
leptophylla.
maritima [Gouan ?]
mauritanica.
orientalis. 3.
platycarpus. 1.
pumila.
tenuifolia. MS.

CEANOTHUS. 264.

- africanus*. 1.
americanus. 1.
asiaticus.

CECROPIA. 1159.

- peltata* (pl.).

CEDRELA. 274.

CEDRELA :—

- Mahagoni* = Swietenia
Mahagoni.
odorata. 3.

CELASTRUS. 268.

- barbarus* [sphalm. =
 Cassine barbara ?]
bullatus. 2. (m. L. f.)
buxifolius. 1.
lucidus. 3.
myrtifolius. 3.
pyracanthus. 1.
scandens. 1.

CELOSIA. 288.

- argentea*. 1.
castrensis. 3.
coccinea. 3.
cristata. 1.
lanata. 3.
margaritacea. 3.
nodiflora.
paniculata. 1.
racemosa. MS.
trigyna.

CELSIA. 774.

- Arcturus*.
cretica.
orientalis. 1.

CELTIS. 1209.

- australis*. I.
occidentalis. 1.
orientalis.

CENCHRUS. 1217.

- capitatus*. 1.
ciliaris.
echinatus. 3.
frutescens.
granularis.
lappaceus.
muricatus. (m. L. f.)
pubescens. MS.
racemosus. 1.
tribuloides. 1.
tripsacoides. MS.

CENTAUREA. 1030.

- acaulis*.
aegyptiaca. 3.
alba. 1.

CENTAUREA :—

alpina.
amara.
 argentea. 2.
 aspera. 2.
 attica. MS.
 babylonica.
 benedicta. 3.
Behen.
 Calcitrapa. 3.
 calcitrapoides. 3.
 capillata. 1.
 Centaurium. 1.
 centauroides. 1.
cichoracea.
 ciliaris. MS.
 Cineraria. 1.
 collina. 3.
 conifera. 1.
 Crocodilium. 3.
 Crupina. 1.
 Cyanus. 1.
 eriophora. 1.
erucifolia.
fruticosa.
 galactites. 3.
 glastifolia. 1.
Isnardi.
 Jacea. 1.
 linifolia. 3.
 Lippii. 3.
 melitensis. 1.
 montana. 1.
 moschata. 1.
 ——— var. *Amberboi*.
muricata.
 napifolia. 1.
 nigra. 3.
 nudicaulis. 3.
 orientalis. 1.
 paniculata. 1.
 pectinata. 3.
peregrina.
 phrygia. 1.
 pullata. 1.
 pumila. 3.
Pumilio = *praec.*
 radiata. 3.

CENTAUREA :—

ragusina. 1.
 repens. 3.
rhapontica.
romana.
rupestris.
 salmantica. 1.
 Scabiosa. 1.
 sempervirens. 1.
Seridis.
sessiliflora.
 sibirica. 1.
 sicala. 3.
 solstitialis. 1.
 sonchifolia. 3.
 sphaerocephala. 1.
 spinosa. 1.
 splendens. 1.
Stoebe.
tingitana.
uniflora.
 Verutum. 3.

CENTELLA. —

glabrata.
villosa.

CENTUNCULUS. 147.

minimus. 1.

CEPHALANTHUS. 118.

occidentalis. 1.
orientalis = *Nauclea*
orientalis.

CERASTIUM. 603.

alpinum. 1.
 aquaticum. 1.
 arvense. 1.
 dichotomum. 1.
 latifolium. 1.
 manticum. 3.
 maximum. 1.
 pentandrum. 1.
 perfoliatum. 1.
repens.
 semidecandrum. 1.
 strictum. 3.
suffruticosum.
 tomentosum.
 viscosum. 1.
 vulgatum. 3.

CERASUS *v.* **PRUNUS**.
CERATOCARPUS. 1086.
 arenarius. 1.
CERATONIA. 1239.
 Siliqua. 1.
CERATOPHYLLUM. 1122.
 demersum. 3.
 (*m. Sol.*)
 submersum. 3.
CERBERA. 296.
 Ahovaj. 1.
 Manghas. 1.
 Thevetia. 2.
CERCIS. 524.
 canadensis. 1.
 Siliquastrum. 3.
CEREUS *v.* **CACTUS**.
CERINTHE. 186.
 Echioides = *Onosma*
 Echioides.
 maculata.
 major. 1.
 minor. 1.
 orientalis = *Onosma*
 orientalis.
CEROPEGIA. 305.
 biflora.
 Candelabrum.
 sagittata.
 tenuifolia.
CESTRUM. 258.
 diurnum. 1.
 nocturnum. 1.
 vespertinum.
CHAEROPHYLLUM. 365.
 arborescens. 3.
 aromaticum. 3.
 aureum.
 bulbosum. 1.
 coloratum. 3.
 hirsutum. 1.
 sylvestre. 1.
 temulentum = *seq.*
 temulum. 1.
CHALCAS. —
 paniculata.
CHAMAEROPS. (*cf.* 1291. No. 1.)
 humilis (*pl.*).

CHAMIRA. 838.
 cornuta (*pl.*).
CHARA. 1088.
 flexilis. 3.
 hispida. 1.
 tomentosa. 1.
 vulgaris. 1.
CHEIRANTHUS. 839.
 africanus = *Heliophila*
 integrifolia.
 alpinus. 3.
 annuus. 1.
 Cheiri. 1.
 chius. 1.
 erysimoides. 1.
 Farsetia. 3.
 fenestralis.
 fruticulosus. 1.
 incanus. 1.
 lacerus = *Hesperis*
 lacera.
 littoreus. 3.
 maritimus.
 salinus.
 sinuatus. 3.
 tricuspidatus. 1.
 trilobus. 1.
 tristis. 3.
 virens. MS.
CHELIDONIUM. 668.
 corniculatum. 1.
 Glaucium. 1.
 hybridum. 1.
 majus. 1.
CHELONE. 765.
 glabra. 1.
 — var. β = *obliqua*.
 hirsuta.
 obliqua.
 Pentstemon. 1.
CHENOLEA. 289.
 diffusa.
CHENOPODIUM. 313.
 album. 1.
 altissimum.
 ambrosioides. 1.
 anthelminticum. 1.
 aristatum. 1.

CHENOPODIUM :—

- Atriplicis. Suppl.
- Bonus-Henricus. 2.
- Botrys. 1.
- fruticosum*.
- glaucum. 1.
- hirsutum*.
- hybridum. 1.
- maritimum. 1.
- multifidum. 1.
- murale. 1.
- polyspermum. 1.
- rubrum. 1.
- rudemale* = murale.
- salsum*.
- Scoparia. 1.
- serotinum. 3.
- urbicum. 1.
- virginicum. 1.
- viride. 1.
- Vulvaria. 1.

CHERLERIA. 586.

- sedoides. 3.

CHIOCocca. 233.

- alternifolia* = Cestrum
- vespertinum.
- nocturna* = Cestrum
- nocturnum.
- racemosa. 3.

CHIONANTHUS. 21.

- virginica. 1.
- zeylonica* [sic].

CHIRONIA. 252.

- angularis. 1.
- baccifera. 1.
- campanulata. 1.
- caryophylloides*.
- dodecandra*.
- frutescens. 3.
- jasminoides. (m. Dahl)
- linoides. 3.
- lychnoides.
- trinervia. 1.

CHLORA. 494.

- dodecandra*.
- perfoliata. 3.
- quadrifolia. 3.

CHONDRILLA. 951.

CHONDRILLA :—

- crepoides*.
- juncea. 1.
- nudicaulis.
- simplex. MS.

CHRYSANTHEMUM. 1012.

- Achilleae*.
- alpinum. 1.
- arcticum. 1.
- atratum. 3.
- Balsamita. 3.
- bipinnatum. 1.
- coronarium. 1.
- corymbiferum.
- corymbosum. 1.
- flosculosum. 3.
- frutescens. 3.
- graminifolium. 3.
- grande. MS.
- indicum. 1.
- inodorum. 3.
- italicum. 3.
- Leucanthemum. 1.
- millefoliatum. 3.
- monspeliense*.
- montanum*.
- Myconis. 3.
- pectinatum. 3.
- segetum. 1. (m. Leche)
- serotinum. 1.

CHRYSITRIX. 1238.

- capensis* (pl.).

CHRYSOBALANUS. 641.

- Icaco. 3.

CHRYSOCOMA. 982.

- biflora. 1.
- cernua. 1.
- ciliata. 1.
- Coma-aurea. 1.
- duriuscula. MS.
- graminifolia* = Solidago
- lanceolata.
- Linosyris. 1.
- oppositifolia. 3.
- patula*.
- scabra. 3.
- scoparia* = Calea
- scoparia.

CHRYSOCOMA :—

tomentosa. 3.

villosa. 1.

CHRYSOGONUM. —*peruvianum* = *Zinnia**pauciflora.**virginianum.***CHRYSOPHYLLUM. 260.***Barbasco.**Cainito.* 3.*glabrum.**maliforme* = *C. Cainito.**oliviforme* = *C. Cainito.***CHRYSOSPLENIUM. 574.***alternifolium.* 1.*oppositifolium.* 1.**CICCA. 1108.***disticha* (pl.).**CICER. 908.***arietinum.* 1.**CICHOBIUM. 962.***Endivia.* 1.*Intybus.* 1.*spinosum.* 1.**CICUTA. 361.***bulbifera.* 1.*maculata.* 1.*virosa.* 1.**CIMICIFUGA. 698.***foetida* (pl.).**CINCHONA. 230.***caribaea.**herbacea*, sphalm. =*praec.**officinalis.* 1.**CINERARIA. 1000.***alpina.* 3.— var. *alata.*— var. *helenitis.*— var. *integrifolia.**amelloides.* 3.*asteroides*, sphalm. =*praec.**aurea.* 3.*canadensis.* 3.*cymbalarifolia.* (m.

Dahl)

geifolia. 3.**CINERARIA :—***glauc.* 3.*linifolia.**lobata.* (m. Dahl) =*geifolia.**maritima.* 3.*othonnites* = *Othonna**frutescens.**palustris.* 3.*purpurata.**sibirica.* 3.*sonchifolia.***CINNA. 15.***arundinacea.* 1.**CIRCAEA. 25.***alpina.* 1.*lutetiana.* 1.— var. *canadensis.***CISSAMPELOS. 1202.***Caapeba.**Pareira.* 3.*smilacina.***CISSUS. 149.***acida.* 3.*cordifolia.**laciniata* = *Sicyos**laciniata.**quadrangularis.* 3.*Sicyoides.**trifoliata.**vitiginea.***CISTUS. 689.***aegyptiacus.* 1.*aegyptius*, lapsu = *praec.**albidus.* 1.*anglicus.**apenninus.* 3.*arabicus.* 3.*calycinus.**canadensis.* 1.*canus.* 3.*capensis.**creticus.**crispus.* 1.*Fumana.* 1.*glutinosus.**guttatus.* 1.*halimifolius.* 1.

CISTUS:—

- Helianthemum*. 3.
heteroclitus. MS.
hirtus. 3.
incanus.
indicus, lapsu = seq.
italicus.
ladaniferus. 32.
laevipes. 3.
laurifolius. 3.
ledifolius. 3.
Libanotis. 3.
Lippii.
marifolius. 1.
monspeliensis. 1.
niloticus.
nummularius. 1.
oelandicus. 1.
pilosus. 3.
polifolius.
populifolius. 3.
racemosus. 3.
salicifolius. 3.
salvifolius. 1.
serpillifolius.
squamatus. 2.
surrejanus.
thymifolius.
Tuberaria. 1.
umbellatus. 1.
villosus. 3.

CITHAREXYLON. 777.

- caudatum*. 3.
cinereum.
fruticosum = *praec.*
quadrangulare.
spinosum (pl.).

CITRUS. 937.

- Aurantium*.
 — var. *decumana*
 = *decumana*.
 — var. *grandis*
 = *decumana*.
 — var. *sinensis*.
decumana.
Medica.
 — var. *Limon*.
trifoliata.

CLATHRUS. 1283.

- cancellatus*.
denudatus.
nudus.
recutitus.

CLAVARIA. 1286.

- Coralloides*.
digitata.
fastigiata.
Hypoxylon.
militaris.
muscoides.
ophioglossoides. (m.
 Ehrh.)
pistillaris. (m. L. f.)

CLAYTONIA. 285.

- Portulacaria*.
sibirica. 1.
virginica. 1.

CLEMATIS. 712.

- cirrrosa*. 3.
crispa. 3.
dioica. 3.
erecta.
Flammula. 1.
integrifolia. 1.
maritima.
orientalis. 3.
recta = *erecta*.
Viorna. 1.
virginiana. 2.
Vitalba. 1.
Viticella. 1.

CLEOME. 850.

- aculeata*.
arabica. 3.
capensis.
dodecandra. 1.
fruticosa. 1.
gigantea.
gynandra = *penta-*
phylla.
heptaphylla.
icosandra. 1.
monophylla.
ornithopodioides. 1.
pentaphylla. 3.
polygama. 3.

CLEOME :—

procumbens.
serrata.
spinosa.
triphylla.
violacea. 1.
viscosa. 3.

CLEONIA. 753.

lusitanica. 3.

CLERODENDRUM. 810.

calamitosum. 3.
fortunatum. 3.
infortunatum. 1.
paniculatum. 3.
scandens. MS.

CLETHRA. 567.

alnifolia. 1.

CLIBADIUM. —

surinamense.

CLIFFORTIA. 1197.

ilicifolia (pl.).
odora. Suppl. (odorata).
polygonifolia.
ruscifolia.
sarmentosa.
strobilifera.
trifoliata.

CLINOPODIUM. 742.

aegyptium. MS.
incanum. 1.
rugosum.
vulgare. 1.

CLITORIA. 902.

brasiliانا = *Glycine*
Galactia.
Galactia = *Glycine*
Galactia.
lutescens = *praec.*
Mariana.
Ternatea. 1.
virginiana.
Zoophthalmum = *Dolichos urens*?

CLUSIA. 1224.

alba = *major.*
flava.
major. 1.

CLUSIA :—

minor = *venosa.*
rosea.
venosa.

CLUYTIA. 1206.

alaternoides. 1.
androgyna. 3.
Cascarilla = *Croton*
Cascarilla.
Eluteria.
polygonoides.
pulchella. 1.
retusa.
stipularis. 3.
tomentosa.

CLYPEOLA. 830.

Alyssoides = *Alyssum*
calycinum.
campestris = *Alyssum*
campestre.
Jonthlaspi. 2.
maritima. 3.
tomentosa. 3.

CNEORUM. 50.

tricoccon. 1.

CNICUS. 967.

Acarna. 2.
benedictus = *Centaurea*
benedicta.
centauroides. 2.
cernuus. 1.
Erisithales. 3.
ferox.
oleraceus. 1.
pygmaeus.
spinosissimus. (m. L. f.)
uniflorus.

COCOLOBA. 511.

barbadensis.
emarginata.
excoriata. 3.
pubescens.
punctata.
tenuifolia. 3.
Uvifera. 3.
venosa.

COCHLEARIA. 826.

anglica. 3.

COCHLEARIA :—

- Armoracia. 3.
- Coronopus. 3.
- danica. 1.
- Draba. 3.
- glastifolia. 1.
- groenlandica (pl.).
- officinalis. 1.
- saxatilis = Myagrum
saxatile.

COCOS. —

nucifera.

CODARIA vide LERCHEA.

CODON. 535.

Royeni.

COFFEA. 232.

- arabica. 1.
- occidentalis.

COIX. 1098.

dactyloides = Tripsacum
dactyloides.

Lacryma-Jobi. 1.

COLCHICUM. 470.

- autumnale. 1.
- montanum. 1.
- variegatum.

COLDENIA. 174.

procumbens.

COLLINSONIA. 43.

canadensis. 1. (pl.)

COLUMNEA. 814.

- longifolia. 3.
- scandens.

COLUTEA. 914.

- arborescens. 1.
- frutescens. 1.
- herbacea. 3.

COMARUM. 659.

palustre. 1.

COMBRETUM. —

- laxum.
- occidentale.
- secundum.

COMETES. 159.

- alterniflora.
- surattensis.

COMMELINA. 65.

africana. 1.

COMMELINA :—

- axillaris.
- benghalensis.
- communis. 1.
- cristata.
- cucullata.
- erecta. 1.
- nudiflora. 1.
- spirata.
- tuberosa. 1.
- vaginata.
- virginica. 3.
- Zanonia. 3. (m. Sol.)

COMOCLADIA. —

- dentata.
- integrifolia.
- pinnatifolia = integri-
folia.

CONFERVA. 1277.

- aegagropila.
- aeruginosa.
- amphibia. (an m. L. f.?)
- bullosa.
- canalicularis.
- cancellata.
- capillaris.
- catenata.
- corallina.
- corallinoides.
- dichotoma.
- fluviatilis. (m. Ehrh.)
- fontinalis.
- gelatinosa.
- glomerata.
- littoralis.
- polymorpha.
- reticulata. (m. Ehrh.)
- rivularis. (m. Ehrh.)
- rupestris.
- scoparia.
- vagabunda.

CONIUM. 343.

- africanum. 3.
- maculatum. 1.
- rigens. 3.
- Royeni.

CONNARUS. 856.

monocarpos (pl.).

CONOCARPUS. 237.

- erecta. 3. (m. Sol.)
procumbens.
racemosa.

CONVALLARIA. 436.

- bifolia. 1.
fruticosa = *Dracæna*
ferrea.
majalis. 1.
multiflora. 1.
Polygonatum. 3.
racemosa. 1.
stellata.
trifolia. 1.
verticillata. 1.

CONVOLVULUS. 218.

- aculeatus.*
aegyptius.
alsinoides.
althaeifolius.
althaeoides. 1.
anceps.
angularis.
arvensis. 1.
Batatas. 1.
biflorus.
brasiliensis.
cairicus. 3.
canariensis.
cantabrica. 1.
carolinus.
Cneorum. 1.
copticus.
corymbosus.
dissectus.
Doryenium. 3.
farinosus.
gangeticus.
hederaceus. 1.
hirtus. 1.
Jalapa.
lineatus. 3.
linifolius.
littoralis.
macrocarpos. 3.
macrohizos.
malabaricus.
martinicensis.

CONVOLVULUS :—

- Medium.* 1.
muricatus.
Nil. 3.
nummularius.
obscurius.
oleraceus. MS.
panduratus.
paniculatus.
peltatus.
pentapetaloides.
pentaphyllus. 3.
 — var. *serpens.*
persicus. 3.
Pes-caprae. 1.
purpureus. 3.
quinquefolius. 3.
repens.
reptans. 1.
Scammonia. 1.
sepium. 1.
sericeus. 3.
serpens.
sibiricus.
siculus. 2.
Soldanella. 1.
spithameus. 1.
terrestris.
tomentosus.
tricolor. 1.
tridentatus.
Turpethum.
umbellatus.
verticillatus. 3.
vitifolius.

CONYZA. 993.

- anthelmintica.* 3.
arborescens. 3.
Asteroides. 3.
aurita. Suppl.
balsamifera.
bifoliata.
bifrons.
 — var. *flosculosa.*
 — var. *radiata.*
candida. 1.
chinensis. 1.
cinerea. 1.

CONYZA :—

- decurrens. 3.
- fruticosa*.
- hirsuta. 1.
- linifolia*.
- lobata.
- odorata. 3.
- pubigera.
- rupestris. 3.
- saxatilis. 3.
- scabra.
- sordida.
- squarrosa. 1.
- tortuosa*.
- virgata. 3.

COPAIFERA. 557.

- officinalis. (m. L. f.)

CORALLINA. 1293.

- corniculata.
- fragilissima.
- mediterranea.
- officinalis.
- Opuntia.
- Penicillus.
- rubens.

CORCHORUS. 691.

- aestuaus. 3.
- capsularis. 3. (*Cf.*
trilocularis in hb.)
- caryophylloides* = sili-
quosus?
- Coreta* = siliquosus.
- hirsutus*.
- hirtus*.
- olitorius. 1.
- siliquosus. 1. (m.
Sol.)
- tridens*.
- trilocularis. 3.

CORDIA. 253

- Bourreria*.
- Callococca. 3.
- Collococca* = præc.
- Gerascanthus. 3.
- glabra. 1.
- macrophylla. 3.
- Myxa. 1.
- Sebestena. 3.

Cordia :—

- spinescens*.

COREOPSIS. 1026.

- alba*.
- alternifolia. 1.
- angustifolia*.
- auriculata*.
- baccata.
- Bidens. 1.
- chrysantha*.
- coronata. 3.
- lanceolata.
- leucantha* = seq.
- leucanthema. 3.
- philadelphica. MS.
- reptans. 3. (m. Sol.)
- tripteris. 1.
- verticillata. 1.

CORIANDRUM. 363.

- sativum. 1.
- testiculatum. 3.

CORIARIA. 1192.

- myrtifolia. 1.
- ruscifolia*.

CORIS. 241.

- monspeliensis. 1.

CORISPERMUM. 12.

- hyssopifolium. 1.
- squarrosus. 1.

CORNUCOPIAE. 76.

- alopecuroides.
- cucullatum. 1.

CORNUS. 151.

- alba*. 3.
- alternifolia. Suppl.
- canadensis. 2.
- florida. 1.
- Mas. 1.
- mascula* = præc.
- sanguinea. 1.
- sericea.
- suecica. 1.

CORNUTIA. 784.

- pyramidata. 1.

CORONILLA. 917.

- argentea*.
- coronata. 3.
- cretica. 1.

CORONILLA :—

- Emerus. 1.
- glauca. 2.
- junceae. 1.
- minima.
- monilis.
- scandens.
- Securidaca. 1.
- valentina. 1.
- varia. 1.

CORRIGIOLA. 386.

- litoralis. 1.

CORTUSA. 199.

- Gmelini. 1.
- Matthioli. 1.

CORYLUS. 1132.

- Avellana. 1.
- Columna. 3.

CORYMBIUM. —

- africanum.*
- glabrum.*
- scabrum.*

CORYPHA. —

- guineensis.*
- thebaica.*
- umbraculifera.*

COSTUS. 4.

- arabicus. 1.

COTULA. 1014.

- alba* = *Eclipta erecta.*
- anthemoides.* 3.
- aurea.* 3.
- capensis.*
- coronopifolia.* 1.
- grandis* = *Chrysanthemum flosculosum.*
- Lidbeckia.* MS.
- nilotica.* MS.
- prostrata* = *Eclipta prostrata.*
- pyrethraea.*
- quinqueloba.* Suppl.
- radiata.*
- sericea.* Suppl.
- Spilanthes* = *Spilanthes urens.*
- stricta.*
- suffruticosa.* MS.

COTULA :—

- tanacetifolia.* 3.
- turbinata.* 3.
- Verbesina.* 3.
- viscosa.*

COTYLEDON. 594.

- hemisphaerica.*
- hispanica.* 3.
- laciniata.* 1.
- orbiculata.* 1.
- serrata.*
- spinosa* = *Crassula spinosa.*
- spuria.*
- Umbilicus.* 1.
- var. *repens.*
- var. *tuberosa.*

CRACCA. —

- maxima* = *Galega maxima.*
- purpurea* = *Galega purpurea.*
- senticosa* = *Galega senticosa.*
- tinctoria* = *Galega tinctoria.*
- villosa* = *Galega villosa.*
- virginiana* = *Galega virginiana.*

CRAMBE. 849.

- hispanica.* 1.
- maritima.* 1.
- orientalis.* 1.

CRANIOLARIA. —

- annua* = *Martynia annua.*
- fruticosa.*

CRASSULA. 400.

- alternifolia.*
- barbata.* Suppl.
- cafra* = *fruticulosa.*
- centauroides.*
- ciliata.*
- coccinea.* 1.
- cordata.* MS.
- cultrata.* (m. L. f.)
- cymosa.*

CRASSULĀ :—

- dichotoma.
- flava*.
- fruticulosus*.
- Glaux. MS.
- glomerata. 3.
- macropetala. MS.
- muscosa.
- nudicaulis*.
- obvallata*.
- orbicularis. (m. L. f.)
- pellucida. (m. L. f.)
- perfoliata.
- Portulacaria* = *Claytonia*
- Portulacaria*.
- pruinosa. 3.
- punctata*.
- rubens. 3.
- scabra*.
- spinosa.
- strigosa*.
- subulata.
- tetragona. 3.
- verticillaris*.

CRATAEGUS. 643.

- Aria. 1.
- var. *fennica*.
- var. *suecica*.
- Azarolus. 1.
- var. *Aronia*.
- coccinea. 1.
- Crus-galli. 1.
- hybridus*.
- indica. 1.
- Oxyacantha. 1.
- tomentosa. 1.
- terminalis. 1.
- viridis. 1.

CRATAEVA. 619.

- gynandra*.
- inermis = *C. Tapia*.
- Marmelos*.
- spinosa. (m. Sol.)
- Tapia*. 1.

CREPIS. 955.

- alpina. 1.
- aspera. 3.
- barbata. 1.

CREPIS :—

- biennis*. 1.
- bursifolia*.
- Dioscoridis. 3.
- foetida. 3.
- hirta. 1.
- neglecta. 3.
- nudicaulis* = *Leontodon*
- hirtum*.
- pulchra*. 3.
- pygmaea. 1.
- rhagadioloides*.
- rubra. 1.
- sibirica. 3.
- tectorum. 1.
- vesicaria. 3.
- virens. 3.

CRESCENTIA. 779.

- cucurbitina*.
- Cujete. 3.

CRESSA. 317.

- cretica. 1.

CRINUM. 415.

- africanum. 1.
- americanum.
- asiaticum. 3.
- barbatum. MS.
- latifolium. 1.
- zeylanicum. 3.

CRITHMUM. 347.

- maritimum. 3.
- pyrenaicum. 3.

CROCUS. 56.

- Bulbocodium*.
- sativus. 1.
- var. *officinalis*.
- var. *vernus*.

CROTALARIA. 895.

- alba*.
- amplexicaulis. 3.
- biflora*.
- chinensis. 3.
- cordifolia.
- heterophylla. Suppl.
- imbricata*.
- incana. 1.
- incanescens. Suppl.
- junceae. 1.

CROTALARIA :—

- laburnifolia. 3.
- latifolia.
- lunaris.
- perfoliata.
- perforata.
- quinquefolia. 3.
- retusa. 1.
- sagittalis. 1.
- sessiliflora.
- sessilifolia, sphalm. =
- praec.
- triflora.
- verrucosa.
- villosa.

CROTON. 1140.

- argenteum. 1.
- aromaticum. 3.
- balsamiferum. 3.
- Benzoe = seq.
- Bentzoe.
- Cascarilla. 3.
- castaneifolium.
- flavens. 3. (m. Sol.)
- glabellum. 3.
- glandulosum. 3.
- hastatum.
- humile. 3. (m. Sol.)
- lacciferum. 3.
- lobatum.
- lucidum. 3.
- moluccanum. 3.
- palustre. 1.
- ricinocarpos.
- sebiferum. 1.
- spinosum.
- subtomentosum.
- Tigilium. 3.
- tinctorium. 3.
- urens = Tragia involu-
- crata.
- variegatum.

CRUCIANELLA. 130.

- aegyptiaca.
- angustifolia. 1.
- latifolia. 3.
- maritima. 3.
- monspeliaca. 1.

CRUCIANELLA :—

- patula. 2.

CRUCITA. —

- hispanica.

CUCUBALUS. 582.

- acaulis = Silene
- acaulis.
- aegyptiacus.
- baccifer. 1.
- Behen. 1.
- var. feminea.
- Catholicus. 1.
- fabarius.
- giganteus = Silene gigan-
- teus.
- italicus. 3.
- mollissimus.
- Otites. 1.
- pumilio. 3.
- quadrifidus = Silene
- quadrifida.
- reflexus. 1.
- saxifragus.
- sibiricus. 3.
- stellatus. 1.
- tataricus.
- viscosus. 1.

CUCUMIS. 1152.

- acutangulus. 1.
- anguinus.
- Anguria. 1.
- Chate. 3.
- Colocynthis. 1.
- Dudaim. 1.
- flexuosus.
- maderaspatanus.
- Melo. 1.
- pedatus = Anguria
- pedata.
- prophetarum.
- sativus.
- trifoliatus = Anguria
- trifoliata.
- trilobatus = Anguria
- trilobata.

CUCURBITA. 1151.

- Citrullus.
- Lagenaria. 2.

CUCURBITA:—

*Melopepo.**nova.**ovifera.* 3.*Pepo.* 2.*verrucosa.*

CUMINUM. 358.

Cuminum. 1.

CUNILA. 38.

mariana. 3.*pulegioides.* 3.*thymoides.* 3.

CUNONIA. 571.

capensis. 3.CUPANIA. — (genus deest
jam anno 1767?).*americana.*

CUPRESSUS. 1137.

disticha. 1.*juniperoides.**sempervirens.* 1.*thyoides.* 1.

CURATELLA. —

americana.

CURCUMA. 7.

longa. 3.*nova.**rotunda.*

CUSCUTA. 170.

americana. 1.*Epithymum.* 2.*europaea.* 1.—— var. *Epithymum.**filiformis.* MS.

CUSSONIA. 376.

thyrsiflora.

CYANELLA. 430.

capensis. 3.

CYCAS. 1292.

circinalis (pl.).

CYCLAMEN. 202.

europæum. 1.*indicum.*

CYMBARIA. 768.

daurica (pl.).

CYNANCHUM. 308.

acutum. 1.*aphyllum.**capense.* Suppl.

CYNANCHUM:—

erectum. 1.*hirtum.**maritimum.**monspeliacum.* 1.*planiflorum* = seq.*planifolium.**racemosum.**suberosum.* 1.*undulatum.**viminale.*

CYNARA. 969.

*acaulis.**Cardunculus* (pl.).*humilis.* 1.*Scolymus.* 3.

CYNOGLOSSUM. 183.

apenninum. 1.*cheirifolium.* 1.*laevigatum.**linifolium.* 1.*lusitanicum.* 3.*montanum.**officinale* = vulgare.*Omphalodes.* 1.*omphaloides* = praec.*virginianum.* 1.*virginicum* = praec.*vulgare.* MS.

CYNOMETRA. 533.

cauliflora. 3.*ramiflora.*

CYNOMORIUM. 1084.

coccineum.

CYNOSURUS. 91.

aegyptius. 1.*aureus.* 1.*caeruleus.* 1.*coracanus.* 3.*cristatus.* 1.*creticus.* MS. (= pro-
cumbens.)*durus.* 1.*echinatus.* 1.*indicus.* 1. (m. Sol.)*Lima.* 1.*panicus.**procumbens.* MS.*virgatus.* 3.

CYPERUS. 70.

- alternifolius. 3.
- annuus. MS.
- articulatus. 3.
- arundinaceus* = *spathaceus*.
- compressus. 1.
- difformis. 3.
- distans. Suppl.
- elatus. 3.
- elegans. 3.
- esculentus*.
- ferrugineus* = *spathaceus*.
- flavescens. 1.
- fuscus*.
- glaber*.
- glomeratus. 3.
- Haspan. 1.
- hexastachyos*.
- Iria*. (cf. C. Haspan in hb.)
- laevigatus.
- ligularis. 3.
- longus. 1.
- minimus*.
- monostachyos.
- mucronatus*.
- odoratus. 3.
- Papyrus. 3.
- pumilus. 3.
- rotundus. 3.
- spathaceus*.
- squarrosus. 3.
- strigosus. 1.
- tenellus. Suppl.
- triflorus.
- vaginatus. MS.

CYPRIPEDIUM. 1061.

- bulbosum. 1.
- Calceolus. 1.

CYRILLA. 272.

- racemiflora. 3.

CYTINUS. 1075.

- Hypocistis. 3.

CYTISUS. 912.

- aethiopicus.
- argenteus. 1.
- austriacus. 3. (m. Jacq. et L. f.)

CYTISUS:—

- Cajan. 1.
- græcus*.
- hirsutus. 1. (m. L. f.?)
- Laburnum. 3.
- monspessulanus*.
- nigricans. 1.
- patens.
- pinnatus* = Robinia
- mitis.
- psoraloides* = Indigofera
- psoraloides.
- sessilifolius. 1.
- supinus. 1. (m. L. f.)

DACTYLIS. 90.

- ciliaris.
- cynosuroides. 1.
- glomerata. 1.
- lagopodoides. 1.
- paleacea.

DAIS. 554.

- cotinifolia. 3.
- octandra. 3.

DALBERGIA. 886. (Suppl.)

- Amerimnon. MS.

DALECHAMPIA. 1138.

- scandens.

DALIBARDA. —

- repens* = Rubus Dali-
barda.

DAPHNE. 500.

- alpina. 3.
- Cneorum. 1.
- Gnidium. 1.
- indica. 2.
- Laureola. 3.
- Mezereum. 1.
- oleoides*.
- pontica*.
- pubescens. 3.
- Tarton-raira. 1.
- Thymelæa. 1.
- villosa. 3.

DATISCA. 1196.

- Cannabina. 1.
- hirta. 1.

DATURA. 243.

- arborea.

DATURA —

- fastuosa*. 3.
- ferox*.
- Metel. 2.
- Stramonium. 1.
- Tatula. 3.

DAUCUS. 340.

- Carota. 1.
- Gingidium. 1.
- mauritanicus. 3.
- muricatus. 3.
- var. *maritimus*.
- Visnaga. 1.

DECUMARIA. 617.

- barbara*.

DELIMA. 683.

- sarmentosa* (pl.).

DELPHINIUM. 694.

- Aconiti. 3.
- Ajaci. 1.
- ambiguum. 3.
- Consolida. 1.
- elatum. 1.
- grandiflorum. 1.
- hybridum.
- monstruosum*.
- peregrinum. 1.
- Staphisagria. 1.

DENTARIA. 834.

- bulbifera*. 2.
- enneaphyllos*. 1.
- pentaphyllos*. 2.

DIALIUM. 23.

- indum* (pl.).

DIANTHERA. 29.

- americana*. 1.
- comata*. 3. (m. L. f.)

DIANTHUS. 581.

- alpinus*.
- arboreus*.
- arenarius*. 1.
- Armeria. 1.
- barbatus*. 1.
- carthusianorum*. 1.
- Caryophyllus. 1.
- var. *coronarius*.
- var. *imbricatus*.
- var. *inodorus*.
- chinensis*. 1.

DIANTHUS:—

- deltoides*. 1.
- diminutus*.
- ferrugineus*.
- fruticosus*.
- glaucus*. 1.
- hyssopifolius* = *superbus*.
- monspeliacus* = *seq.*
- monspeliensis*.
- plumarius*. 1.
- pomeridianus*. 3.
- prolifer*. 1.
- pungens*.
- saxifragus*.
- superbus*. 3.
- virginicus*. 3.

DIAPENSIA. 195.

- helvetica*.
- lapponica*. 1.

DIASPERUS = PHYLLANTHUS.

DIASTEMA. Linn. f. MS. =

- DALBERGIA.

DICTAMNUS. 536.

- albus* (pl.).

DIGITALIS. 775.

- ambigua*.
- canariensis*. 1.
- ferruginea*. 1. (*cf.*
- lutea*.)
- lutea*. 1.
- minor*.
- obscura*.
- ochroleuca* [an m. L. f. ?
- = *ambigua*?]
- purpurea*. 1.
- Thapsi*.

DILATIS. 63.

- corymbosa*. (m. L. f.)
- viscosa*. (m. L. f.)

DILLENIA. —

- indica*.

DIODIA — (deest).

- virginiana*.
- virginica* = *præc.*

DIONAEA. 555.

- Muscipula*. (“Musci-
- capa*.”)

DIOSCOREA. 1184.

- aculeata*.

DIOSCOREA : —

- alata*. 1.
- bulbifera*. 1.
- oppositifolia*.
- pentaphylla*.
- sativa*. 1.
- triphylla*.
- villosa*.

DIOSMA. 270.

- barbiger*a. Suppl.
- capensis*.
- capitata*. (m. L. f.)
- ciliata*. 1.
- crenata*. 3.
- crenulata* = *praec.*
- cupressina*.
- ericoides*. 3.
- hirsuta*. 1.
- imbricata*.
- lanceolata*.
- latifolia*. Suppl.
- marginata*. Suppl.
- oppositifolia*. 1.
- pulchella*.
- rubra*. 1.
- uniflora*. 1.

DIOSPYROS. 1231.

- australis*. MS.
- Lotus*. 1.
- virginiana*. 1.

DIPSACUS. 119.

- fullonum*. 1.
- laciniatus*. 1.
- pilosus*. 1.

DIRCA. 501.

- palustris*. 1.

DISA. 1060.

- uniflora* (pl.).

DISANDRA. 475.

- prostrata* (pl.).

DODARTIA. 860.

- indica*. 1.
- orientalis*. 1.

DODECAS. 623. Suppl.

- surinamensis* (pl.).

DODECATEON. 201.

- Meadia*. 2.

DODONAEA. 495.

- viscosa* (pl.).

DOLICHOS. 900.

- altissimus*.
- aristatus*.
- biflorus*.
- bulbosus*. 3.
- capensis*.
- Catiang*.
- ensiformis*.
- erosus* = *bulbosus*.
- filiformis*. 3. (m. Sol.)
- Lablab*. 1.
- lignosus*.
- minimus*. 3.
- polystachios*. 3.
- pruriens*. 3.
- pubescens*. 3.
- purpureus*. 3.
- regularis*.
- repens*, (m. Sol.) =
- uncinatus*.
- scarabaeoides*. 1.
- sesquipedalis*.
- sinensis*.
- Soja*. 3.
- tetragonolobus*. 3.
- trilobatus* = *Glycine*
- triloba*.
- trilobus*. 1.
- uncinatus*.
- unguiculatus*.
- urens*.

DORONICUM. 1002.

- Bellidiastrum*. 1.
- incanum*.
- pardalianches*. 1.
- (m. L. f.)
- plantagineum*. 1.

DORSTENIA. —

- alewiteria*.
- caulescens*.
- Contrajerva*.
- var. *Houstoni* =
- Houstoni*.
- Drakena*.
- Houstoni*.

DRABA. 823.

- nizoides*. 3.
- alpina*. 1.
- ciliaris*. 3.

DRABA :—

- hirta. 3.
- incana. 1.
- muralis. 1.
- nemorosa. 1.
- pyrenaica. 1.
- verna. 1.

DRACAENA. 435.

- Draco.*
- ensifolia. 3.
- ferrea. 3.
- graminifolia. 3.
- terminalis.
- volubilis. Suppl.

DRACOCEPHALUM. 746.

- altajense.*
- austriacum. 1.
- canariense. 1.
- canescens. 1.
- grandiflorum. 1.
- Moldavica. 1.
- nutans. 1.
- peltatum. 1.
- peregrinum. 3.
- pinnatum. 1.
- Ruyschiana. 1.
- sibiricum. 3.
- thymiflorum. 1.
- virginianum. 1.

DRACONTIUM. 1080.

- camtschatcense.*
- foetidum. 1.
- pertusum.*
- polyphyllum. (m. L. f.)
- spinosum.*

DRIMYS [Forst.] 696.

- "Wintera" Sm. MS.
- axillaris* [Forst.].
- granadensis* [Forst.].
- Winterana (m. L. f.) =
- Winteri [Forst.].

DROSERA. 398.

- capensis. 3.
- cistiflora. 3.
- cuneifolia. MS.
- indica.
- longifolia. 1.
- lusitanica. 3.
- rotundifolia. 1.

DROSERA :—

verticillata.

DRUPINA. —

cristata.

DRYAS. 658.

- octopetala. 1.
- pentapetala. 1.

DRYPIS. 389.

spinosa. 3.

DURANTA. 806.

- Ellisia. 3. (m. Sol.)
- erecta.*
- Plumieri. 3.
- repens.*

DURIO. 940.

zibethinus.

EBENUS. 929.

- capensis.*
- cretica.* 1.

ECHINOPHORA. 336.

- spinosa.* 1.
- tenuifolia.* 3.

ECHINOPS. 1045.

- corymbosus.*
- fruticosus.*
- Ritro. 1.
- sphaerocephalus. 1.
- spinosus.* 3.
- strigosus.* 1.

ECHITES. 302.

- agglutinata.*
- annularis.*
- biflora.*
- caudata. 3.
- corymbosa.*
- nova = syphilitica.
- quinquangularis.
- scholaris. 3.
- spicata.*
- suberecta.*
- syphilitica. Suppl.
- torulosa.*
- trifida.*
- umbellata.*

ECHIUM. 191.

- argenteum.
- capitatum. 3.

ECHIMUM :—

- creticum.* 1.
- fruticosum.* 1.
- glabrum.*
- italicum.* 1.
- laevigatum.* 3.
- lusitanicum.* 3. (m. L. f.)
- orientale.*
- plantagineum.*
- pyrenaicum.*
- spicatum.* MS.
- violaceum.* 3.
- vulgare.* 1.

ECLIPTA. 1020.

- alba.* MS. [= seq. ?]
- erecta.*
- latifolia.* Suppl.
- prostrata.* (m. Sol.)
- punctata* = *erecta* ?

EHRETIA. 254.

- Bourreria.* 3. (m. Sol.)
- exsucca.*
- spinosa* [Jacq.].
- tinifolia.* 3.

ELAEAGNUS. 160.

- angustifolia.* 1.
- latifolia.* 1.
- orientalis.* 3.
- spinosa.* 3.

ELAEOCARPUS. 681.

- serrata* (pl.).

ELAIS. —

- guineensis.*

ELATE. —

- sylvestris.*

ELATERIUM. —

- carthaginense.*
- trifoliatum.*

ELATINE. 517.

- Alsinastrium.* 1.
- Hydropiper* (pl.).

ELEGIA. 1164 A.

- juncea.* (m. Dahl)

ELEPHANTOPUS. 1043.

- scaber.* 1.
- tomentosus.* 1.

ELLISIA. 206.

- acuta.*
- Nyctelea.*

ELYMUS. 100.

- arenarius.* 3.
- canadensis.*
- caninus.* 3.
- Caput-Medusae.* 3.
- europaeus.* 3.
- Hystrix.* 3.
- monococcus.*
- philadelphicus.* 3.
- sibiricus.* 3.
- virginicus.* 3.

EMPETRUM. 1160.

- album.* 1.
- nigrum.* 1.

EPHEDRA. 1200.

- distachya.* 1.
- monostachya.*

EPIDENDRUM. 1062.

- aloifolium.*
- amabile.* 1.
- carinatum.*
- caudatum.*
- ciliare.*
- coccineum.*
- cochleatum.* 3.
- cucullatum.*
- domesticum.*
- ensifolium.* 3.
- Flos-aëris.* 3.
- furvum.*
- graminifolium.*
- guttatum.*
- juncifolium.*
- lineare.* [Jacq.]
- moniliforme.*
- nocturnum.*
- nodosum.*
- ophioglossoides.*
- ovatum.*
- punctatum.*
- pusillum.* 3.
- retusum.*
- ruscifolium.*
- scriptum.*
- secundum.*
- spatulatum.*
- tenuifolium.*
- terrestre.*
- tuberosum.*

EPIDENDRUM :—

Vanilla. 3.

EPIGAEA. 564.

repens. 1.

EPILOBIUM. 486.

alpinum. 3.

angustifolium. 1.

hirsutum. 1.

latifolium. 1.

montanum. 1.

palustre. 1.

tetragonum. 1.

EPIMEDIUM. 150.

alpinum. 1.

EQUISETUM. 1241.

arvense. 3.

fluviatile. 1.

giganteum.

hyemale. 3.

limosum.

palustre. 1.

sylvaticum. 1.

ERANTHEMUM. 24.

angustatum.

angustifolium = *præc.*

capense.

parvifolium.

ERICA. 498.

abietina. 3.

absinthoides.

albens.

arborea. 3.

articularis. 3. (m.

L. f.)

australis.

baccans.

Bergiana.

bruniades = *capitata*.

caffra.

calycina.

capitata.

carnea.

caudata. MS.

cerinthoides.

ciliaris. 3.

cinerea. 1.

coccinea.

comosa.

corifolia

cubica.

ERICA :—

cubitatis = *viscaria*?

curviflora. 3.

Daboëcia = *Andromeda*

Daboëcia.

denticulata.

depressa.

empetrifolia. 3.

fastigiata. 3.

gnaphalodes.

granulata.

halicacaba. 3.

herbacea. 2.

hispidula. 3.

imbricata. 3.

lutea.

mammosa.

mauritanica.

mediterranea.

melanthera.

mucosa.

multiflora. 3.

nigrita. 3.

nudiflora.

pallide-purpurea.

paniculata. 3.

parviflora. 3.

Passerinae. Suppl.

pentaphylla.

persoluta.

Petiveri.

physodes.

pilulifera. 3.

planifolia. 3.

Plukenetii. 3.

pubescens. 3.

pulcherrima. MS.

purpurascens.

racemosa. MS.

ramentacea.

regerminans.

retorta. Suppl.

scoparia. 1.

spicata. MS.

spumosa. 3.

tenuifolia. 3.

Tetralix. 1.

triflora. 3.

tubiflora. 3.

umbellata. 1.

ERICA :—

- vagans.
- vegetula. MS.
- viride-purpurea. 3.
- viscaria.
- vulgaris. 1.

ERIGERON. 994.

- acre. 1.
- aegyptiacum. 3.
- alpinum. 3.
- bonariense. 1.
- camphoratum.
- canadense. 3.
- carolinianum.
- foetidum.
- glutinosum. 3.
- Gouani.
- gramineum. 1.
- graveolens. 3.
- jamaicense. 3. (m. Sol.)
- obliquum.
- philadelphicum. 1.
- pinnatum. Suppl.
- siculum. 3.
- tricuneatum. 3. Suppl.
- tuberosum. 3.
- uniflorum. 1.
- viscosum. 1.

ERINUS. 789.

- africanus. 1.
- alpinus. 1.
- americanus. MS.
- capensis. (m. L. f.)
- laciniatus.
- peruvianus. 3.

ERIOCAULON. 105.

- decangulare. 1.
- quinquangulare.
- setaceum.
- sexangulare. 1.
- triangulare.

ERIOCEPHALUS. 1040.

- africanus. 1.
- pectinifolius = Hippia
- frutescens.
- racemosus.

ERIOPHORUM. 72.

- alpinum. 1.
- cyperinum.

ERIOPHORUM :—

- polystachion. 1.
- vaginatum. 1.
- virginicum. 1.

ERITHALIS. —

- fruticosa.

ERVUM. 907.

- Ervilia. 1.
- hirsutum. 1.
- Lens. 1.
- monanthos. 1.
- soloniense.
- tetraspermum. 1.

ERYNGIUM. 331.

- alpinum.
- amethystinum. 1.
- aquaticum. 1.
- campestre. 1.
- foetidum. 1.
- maritimum. 1.
- planum. 1.
- pusillum.
- tricuspidatum. 2.
- trifidum.

ERYSIMUM. 837.

- Alliaria. 1.
- Barbarea. 2.
- cheiranthoides. 1.
- hieracifolium. 2.
- incanum. MS.
- officinale. 1.
- repandum. 3.

ERYTHRINA. 888.

- Corallodendrum. 3.
- var. *occidentalis*.
- var. *orientalis*.
- Crista-galli.
- herbacea. 3.
- picta.
- Piscipula.
- planisiliqua.
- variegata.

ERYTHRONIUM. 424.

- Dens-canis. 1.

ERYTHROXYLON. 591.

- areolatum. 3.
- havanense.

ESCALLONIA. 275.

- myrtilloides. (m. L. f.)

ETHULIA. 977.

- Bidentis.
- conyzoides. 3.
- divaricata. 3.
- sparganophora*.
- tomentosa. 3.

EUCLEA. 1194.

- racemosa* (pl.).

EUGENIA. 636.

- acutangula*.
- cotinifolia* [Jacq.].
- Jambos [basin versus].
- malaccensis*.
- Pseudo-Psidium* [Jacq.].
- racemosa*.
- uniflora. 1.

EUONYMUS. 269.

- americanus. 1.
- Colpoon = Cassine
- capensis.
- europaeus. 1.
- var. *latifolius*.
- var. *tenuifolius*.
- japonicus. Suppl.
- verrucosus. MS.

EUPATORIUM. 978.

- album. 3.
- altissimum. 1.
- aromaticum. 1.
- cannabinum. 1.
- chinense*.
- coelestinum. 2.
- Dalea. 3.
- fruticosum*.
- hastatum. 3.
- Houstonianum*.
- Houstonis* = praec.
- hyssopifolium*.
- ivaefolium. 3.
- macrophyllum*.
- maculatum. 2.
- odoratum. 3.
- perfoliatum. 1.
- purpureum. 1.
- rotundifolium. 1.
- scandens. 1.
- sessilifolium. 1.
- sophiaefolium*.
- trifoliatum. 1.

EUPATORIUM:—

zeylanicum.

EUPHORBIA. 630.

- aleppica. 1.
- amygdaloides. 1.
- antiquorum*.
- Apios. 3.
- canariensis.
- canescens. 3.
- Caput-Medusae*.
- cereiiformis*.
- Chamaesyce. 1.
- Characias. 1.
- coralloides. 1.
- corollata. 1.
- cotinifolia*.
- Cyparissias. 1.
- dendroides*.
- dulcis. 1.
- epithymoides. 1.
- Esula. 1.
- exigua. 1.
- var. *acuta*.
- var. *retusa*.
- falcata. 1.
- genistoides*.
- germanica*.
- graminea*.
- helioscopia. 1.
- heptagona*.
- heterophylla*.
- hirta. 1.
- hyberna. 1.
- hypericifolia. 1.
- hyssopifolia. 3.
- Ipecacuanhae. 1.
- Lathyris. 1.
- maculata. 1.
- mammillaris*.
- mauritanica*.
- Myrsinites. 1.
- myrtifolia* = seq.
- myrtillifolia. 3. (m. Sol.)
- neriifolia. 1.
- ocymoidea*.
- officinarum*.
- orientalis. 1.
- origanoides. 1.
- palustris. 1.

EUPHORBIA :—

- Paralias*. 1.
parviflora.
pedicellata. MS.
Peplis. 1.
Peplus. 1.
pilosa. 1.
pilulifera. 1.
pineae.
Pithyusa. 1.
platyphyllos. 1.
polygonifolia. 1.
portlandica. 3.
portulacoides. 1.
segetalis. 1.
serrata. 1.
spinosa. 1.
stricta.
sylvatica. 1.
Terracina. 3.
thymifolia. 1.
Tirucalli.
Tithymaloides.
 — var. *myrtifolia*.
 — var. *padifolia*.
tuberosa.
verrucosa. 1.
viminalis.

EUPHRASIA. 759.

- latifolia*. 3.
linifolia. 3.
 — var. *viscosa* = Buch-
 nera *linifolia*.
lutea. 1.
Odontites. 1.
officinalis. 1.
tricuspidata. 3.
viscosa = Buchnera *lini-*
folia.

EVOLVULUS. 393.

- alsinoides*. 3.
emarginatus. MS.
gangeticus.
linifolius. 3.
nummularius. 3.
tridentatus.

EVONYMUS v. EUONYMUS.

EXACUM. 143.

- albens*. Suppl.

EXACUM :—

- aureum*. Suppl.
cordatum, sphalm. =
sessile.
pedunculatum.
sessile.

EXCOECARIA. 1162.

- Agallocha* (pl.).

FAGARA. 152.

- octandra*.
piperita.
Pterota. 3.
tragodes [Jacq.].

FAGONIA. 546.

- arabica* = *cretica*.
cretica. 1.
hispanica = *cretica*.
indica [Burm. f.] =
cretica.

FAGUS. 1130.

- Castanea*. 1.
pumila. 1.
sylvatica. 2.

FALCKIA [seu FALKIA]. 461.

- repens* (pl.). Suppl.

FERRARIA. 1065.

- undulata* (pl.).

FERULA. 350.

- Assa-foetida*.
canadensis.
communis. 3.
Ferulago.
glauc.
meoides.
nodiflora.
orientalis.
tingitana. 1.

FESTUCA. 92.

- amethystina*.
barbata.
bromoides. 1.
calycina. 3.
cristata. 1.
decumbens. 1.
dumetorum. 3.
duriuscula. 3.
elatior. 1.

FESTUCA :—

- elatior* var. *sibirica*.
fluitans.
fusca. 3.
maritima.
Myurus. 1.
ovina. 1.
 — var. *vivipara*.
phoenicoides.
reptatrix. 3.
rubra. 1.
serotina = *Agrostis serotina*.
spadicea.

FEVILLEA. 1180.

- cordifolia*.
scandens.
trilobata (m. Sol.) [ap.
 ZANONIAM, 1179].

FICUS. 1240.

- benghalensis*.
Benjaminia.
Carica. 1.
indica. 3.
lactea. MS.
maculata.
nymphaeifolia.
perforata.
pumila. 3.
racemosa = *indica*?
religiosa. 3.
retusa. 3.
serrata.
Sycomorus. 1.
toxicaria.
trigonata.

FILAGO. 1041.

- acaulis* = *pygmaea*.
arvensis. 2.
gallica. 2.
germanica. 3.
Leontopodium. 3.
maritima = *Athanasia*
maritima.
montana. 2.
pygmaea. 1.
pyramidata = *germanica*.

FLAGELLARIA. 463.

- indica*. 1.

FLUSTRA. 1296.

FONTINALIS. 1261.

- antipyretica*. (m. Sol.)
capillacea.
minor.
pennata.
squamosa. 3.

FORSKOHLEA. 605.

- tenacissima* (pl.).

FOTHERGILLA. 693.

- Gardeni* (pl.).

FRAGARIA. 654.

- chilensis*. MS.
monophylla. 3. [m.
 Duchesne].
muricata.
sterilis. 3.
vesca. 1.
 — var. *chiloënsis*: cf.
 F. *chilensis*.
 — var. *muricata*: cf.
 F. *muricata*.
 — var. *pratensis*.
 — var. *sativa*.
 — var. *sylvestris*.

FRANKENIA. 457.

- hirsuta*. 1.
laevis. 1.
pulverulenta. 1.

FRAXINUS. 1230.

- americana*. 1.
excelsior.
Ornus.

FRITILLARIA. 421.

- imperialis*. 1.
Meleagris. 1.
nana.
persica.
pyrenaica. 1.
regia.

FUCHSIA. —

- multiflora*.
triphylla.

FUCUS. 1274.

- abrotanifolius*. 1.
acinarius. 3.
aculeatus. 3.
alatus.
barbatus.

FUCUS:—

buccinalis. (m. L. f.)
 canaliculatus. 3.
 cartilagineus. 1.
 ceranoides. 3.
 ciliatus. 3.
 concatenatus. 3.
 confervoides.
 crispatus. 3.
 crispus. 3.
 dentatus.
 digitatus. 3.
 discors. 3.
 distichus. 3.
 divaricatus. 1.
 elongatus. 1.
ericoides.
 esculentus. 3.
excisus.
 fastigiatus. 1.
 Filum.
 foeniculaceus. 3.
 furcellatus. 3.
 gigartinus. 3.
 granulatus. 3.
 hirsutus. 3.
 inflatus. 3.
lacerus.
 lanosus. 3.
 lendigerus. 1.
 loreus. 3.
 lycoperdioides. 3.
muscoides.
 natans. 1.
 nodosus. 1.
 ornatus.
ovarius, sphalm. =
 uvarius.
palmatus.
 pavonius.
 plumosus.
 pyriferus. (m. L. f.)
 ramentaceus. 3.
 rubens. 3.
 saccharinus. 1.
 sanguineus. 3.
 selaginoides. 3.
 serratus. 3.
 siliculosus. 3.
 siliquosus. 3.

FUCUS:—

spermophorus. 3.
 spinosus.
 spiralis. 3.
Tendo.
 triqueter (triquebrac-
 tus?).
 turbinatus. 3.
uranus.
usneoides.
 uvarius. 3.
 venosus.
 vesiculosus. 3.
 vittatus. 3.
 volubilis. 3.

FUMARIA. 881.

Amanni. MS.
 bulbosa. 1.
 — var. *cana*.
 — var. *intermedia*.
 — var. *solida*.
 Capnoides. 1.
capreolata = officinalis,
 var.
 claviculata. 3.
 Cucullaria. 2.
 enneaphylla. 3.
lutea.
 nobilis. 3.
 officinalis. 1.
 sempervirens. 1.
 spectabilis. 1.
 spicata. 3.
 vesicaria. 1.

FUSANUS. —

compressus.

GAHNIA. 459.

procera [Forst.].

GALANTHUS. 409.

nivalis. 1.

GALAX. —

aphylla.

GALAXIA. 851.

angustifolia. MS.

latifolia. MS.

monadelphica. MS.

GALEGA. 924.

caribaea.

GALEGA :—

- cinerea. 3.
- fruticosa*.
- littoralis. 3.
- maxima*.
- officinalis. 1.
- purpurea. 3.
- senticosa*.
- tinctoria*.
- villosa*.
- virginiana. 3.

GALENIA. 507.

- africana. 1.
- procumbens. Suppl.

GALEOPSIS. 734.

- Galeobdolon. 1.
- hirsuta* = *Stachys hirta*.
- Ladanum. 1.
- Tetrahit. 1.
- var. *cannabina*.
- var. *grandiflora*.

GALIUM. 129.

- Aparine. 1.
- aristatum. 3.
- bermudense*.
- bermudianum* = *praec.*
- boreale. 3.
- glaucum. 1.
- graecum. 3.
- hierosolymitanum. 3.
- laevigatum*.
- maritimum. 3.
- minutum. 1.
- Mollugo. 1.
- montanum. 3.
- palustre. 1.
- parisiense. 1.
- purpureum. 1.
- pusillum. 3.
- rotundifolium. 1.
- rubroides. 1.
- rubrum*.
- saxatile. 1.
- scabrum. 1.
- spurium.
- sylvaticum. 3.
- tinctorium. 1.
- trifidum. 1.
- uliginosum. 1.

GALIUM :—

- verum. 1.

GARCINIA. 615.

- celebica*.
- cornea*.
- Mangostana*.

GARDENIA. 297.

- florida*.
- Mussaenda. Suppl.
- Thunbergia. Suppl.

GARIDELLA. 587.

- Nigellastrum. 1.

GAULTHERIA. 565.

- procumbens. 1.

GAURA. 485.

- biennis. 1.
- fruticosa*.

GENIPA. —

- americana*.

GENISTA. 892.

- anglica. 1.
- canariensis. 1.
- candicans. 3.
- florida. 3.
- germanica. 2.
- hispanica. 1.
- humifusa. 3.
- linifolia. 3.
- lusitanica. 3.
- pilosa. 1.
- purgans.
- sagittalis. 1.
- sibirica.
- tinctoria. 1.
- tridentata. 1.

GENTIANA. 328.

- acaulis. 1.
- Amarella. 1.
- aphylla*.
- aquatica. 1.
- asclepiadea. 1.
- aurea. 3.
- bavarica. 1.
- campestris. 1.
- Centaurium. 1.
- ciliata. 1.
- Cruciata. 1.
- decumbens. Suppl.
- exacoides*.

GENTIANA:—

- exaltata* = *bavarica*?
filiformis. 1.
heteroclita.
lutea.
maritima. 3.
navalis. 1.
perfoliata. 1.
Pneumonanthe. 1.
pulchella [Sw].
pumila.
punctata. 1.
purpurea.
pyrenaica. 3.
quadrifolia.
quinqueflora.
quinquefolia. 1.
Saponaria. 1.
sessilis.
spicata. 2.
utriculosa. 3.
verna. 1.
verticillata.
villosa.

GEOFFRAEA. —

spinosa.

GERANIUM. 858.

- abrotanifolium*. Suppl.
acaule.
acetosum. 3.
aionium. MS.
alceoides. 3.
alchemilloides. 1.
althaeoides. 3.
Arduinum.
argenteum. 3.
auritum.
betulinum. 1.
bohemicum. 3.
capitatum. 1.
carnosum.
carolinianum. 1.
chium. 3.
ciconium. 3.
cicutarium. 1.
 — var. *moschatum* =
moschatum.
columbinum. 1.
coriandrifolium. 3.

GERANIUM:—

- cotyledonis*.
crispum.
cucullatum. 1.
dissectum. 2.
flavum.
foetidum. MS.
fulgidum. 3.
fuscum.
gibbosum.
glaucophyllum. 1.
grandiflorum = *Grielum*
tenuifolium.
grossularioides. 1.
gruinum. 1.
hermannifolium.
hispidum. Suppl.
hybridum. 3. (m. L. f.)
incanum.
incarnatum. (m. L. f.)
inquinans. 1.
lobatum.
 — var. *hirsutum*.
 — var. *pinnatifidum*.
lucidum. 1.
macrorrhizum. 2.
maculatum. 1.
Malacoides. 1.
maritimum. 3.
molle. 1.
moschatum. 3.
myrrhifolium. 1.
nodosum. 1.
odoratissimum. 1.
palustre. 3.
papilionaceum. 3.
peltatum. 3.
phaeum. 1.
pinnatum.
pratense. 1.
prolificum. 3.
 — var. *auritum*.
 — var. *longifolium*.
 — var. *oxaloides*.
 — var. *pinnatum*.
 — var. *proliferum*.
pusillum. 3.
pyrenaicum [Burm. f.].
rapaceum.

GERANIUM :—

- reflexum.
- Robertianum. 1.
- romanum.
- rotundifolium. 1.
- sanguineum.
- scabrum. 3.
- sibiricum. 1.
- spinosum.
- striatum. 3.
- sylvaticum. 1.
- tabulare. 3.
- triste. 1.
- tuberosum. 1.
- versicolor = striatum.
- vitifolium. 3.
- zonale. 1.

GERARDIA. 764.

- delphinifolia.
- flava. 1.
- glutinosa. 1.
- pedicularia. 1.
- purpurea. 1.
- tuberosa.

GEROPOGON. 945.

- calyculatum.
- glabrum. 3.
- hirsutum.

GESNERIA. 766.

- acaulis.
- humilis.
- nigrina. MS.
- tomentosa. (m. Sol.).

GETHYLLIS. 445.

- afra. 2.

GEUM. 657.

- montanum. 3.
- reptans.
- rivale. 1.
- urbanum. 1.
- virginianum. 1.

GINGKO. —

- biloba (pl.).

GINORA. —

- americana.

GISEKIA. 399.

- pharnacioides (pl.).

GLABBARIA. 938.

GLABBARIA :—

- tersa (pl.).

GLADIOLUS. 59.

- alatus = labialis.
- alopecuroides. 3. 1767
- angustus. 1. 1753
- capitatus.
- carneus [Burm. f.]. Deluge
- communis. 1. 1753
- decurrens. MS.
- imbricatus. 1. 170
- involutus [Burm. f.]. Del
- labialis. MS.
- montanus. Suppl.
- palmaris. MS.
- permeabilis [Burm. f.].
- phalangioides, MS. =
- montanus.

- plicatus. 3.

- ramosus.

- recurvus, cf. trigyna.

- scorpius, MS. = mon-
- tanus.

- spicatus. 1.

- trigyna. MS.

- tristis. 3.

- undulatus. 3.

GLAUX. 291.

- maritima. 1.

GLECHOMA. 732.

- arvensis. 1. (=Stachys
- arvensis).

- belgica = praec.

- hederacea. 1.

GLEDITSIA. 1229.

- inermis.

- triacanthos. 1.

GLINUS. 631.

- dictamnoides.

- lotoides. 1.

GLOBBA. 45.

- marantina.

- nutans.

- uviformis.

GLOBULARIA. 117.

- Alypum. 1.

- bisnagarica.

- cordifolia. 1.

- nudicaulis. 3.

GLOBULARIA :—

- orientalis*. 1.
- spinosa*.
- vulgaris*. 1.

GLORIOSA. 423.

- simplex*.
- superba*. 1.

GLUTA. 1068.

- Benghas* (pl.).

GLYCINE. 901.

- Abrus* = *Abrus precatorius*.
- Apios*. 1.
- bituminosa*. 3.
- bracteata* = *monoica*.
- comosa*. 3.
- frutescens*.
- Galactia*.
- javanica*. 1.
- labiata*. (m. Dahl ?)
- monoica*. 3.
- monophylla*. 3.
- nummularia*.
- subterranea*. 3.
- tomentosa*. 1.
- triloba*.

GLYCYRRHIZA. 916.

- echinata*. 1.
- glabra*. 1.
- hirsuta*.

GMELINA. 780.

- asiatica*. 3.

GNAPHALIUM. 989.

- alpinum*. 2.
- arborescens*.
- arborescens* = *præc.*
- arenarium*. 2.
- arvense* = *Filago arvensis*.
- coronatum*. 3.
- crassifolium*. 3.
- crispum*.
- cylindricum*.
- cylindriflorum* = *præc.*
- cymosum*.
- declinatum*. Suppl.
- decurrens*.
- dentatum*.
- dioicum*. 1.
- var. *mas*.

GNAPHALIUM :—

- dioicum* var. *femina*.
- discolorum*.
- ericoides*.
- eximium*.
- foetidum*. 3.
- fruticans*.
- gallicum* = *Filago gallica*.
- germanicum* = *Filago germanica*.
- glomeratum*. (m. L. f.)
- grandiflorum*. 3.
- helianthemifolium*. 3.
- ignescens*. 2.
- imbricatum* = *paniculatum*.
- indicum*. 3.
- latifolium*.
- Leontopodium* = *Filago Leontopodium*.
- luteo-album*. 3.
- margaritaceum*. 2.
- maritimum*.
- montanum* = *Filago montana*.
- mucronatum*.
- muricatum*. 2.
- niveum*.
- nudiflorum*.
- obtusifolium*. 2.
- Oculus-cati*. Suppl.
- odoratissimum*. 3.
- orientale*. 2.
- patulum*. 2.
- paniculatum*, MS. [an Berg. ?]
- pedunculare*.
- petiolatum*.
- pilosellum*. Suppl.
- plantagineum* = *seq.*
- plantaginifolium*.
- procumbens*. MS.
- purpureum*. 2.
- repens*.
- rutilans*. 2.
- sanguineum*. 3.
- saxatile* = *Conyza saxatile*.
- scabrum* = *squarrosus*.

GNAPHALIUM :—

- serratum.*
sordidum = Conyza
sordida.
squarrosus.
stellatum.
Stoechas. 2.
stuposum.
supinum.
sylvaticum. 2.
teretifolium.
uliginosum. 2.
undulatum. 3.
verticillatum. Suppl.
virgatum.

GNETUM. 1148.

Gnemon (pl.).

GNIDIA. 502.

- oppositifolia.*
pinifolia. (m. L. f.)
radiata. 3.
sericea. 3.
simplex. 3.
tomentosa. 3.

GOMOZIA. 172.

granadensis (pl.).
 Suppl.

GOMPHRENA. 319.

- brasiliانا.*
brasiliensis = *praec.*
ficoidea = *Illecebrum*
ficoideum.
flava.
fruticosa. MS.
globosa. 1.
hispida.
interrupta.
perennis.
polygonoides = *Illece-*
brum polygonoides.
serrata.
sessilis = *Illecebrum*
sessile.
vermicularis = *Illece-*
brum vermiculatum.

GORDONIA. 877.

Lasianthus.

GORTERIA. 1027.

asteroidea, MS. = seq.

GORTERIA :—

- asteroides.* Suppl.
barbata. Suppl.
ciliaris. 3.
fruticosa. 3. [*cf. bar-*
bata.]
herbacea. Suppl.
personata. 3.
rigens. 3.
setosa.
squarrosa.

GOSSYPIUM. 874.

- arboreum.* 1.
barbadense. 1.
herbaceum. 1.
hirsutum. 3.
praestantissimum. MS.
religiosum. 3.

GOUANIA. 1226.

domingensis (pl.).

GRATIOLA. 30.

- dubia* = *Lindernia Pyxi-*
daria.
hyssopioides. (m.
Sparrm.)
Monnieri. 3. (m. Sol.)
officinalis. 1.
peruviana.
rotundifolia.
virginiana. 1.

GREWIA. 1076.

- asiatica* (pl.) 3.
Microcos. 3.
occidentalis. 1.
orientalis.

GRIAS. —

cauliflora.

GRIELUM. 599.

tenuifolium (pl.).

GRISLEA. —

secunda.

GRONOVIA. —

scandens.

GUAIACUM. 532.

- afrum.* 1.
officinale. 1.
sanctum. 3.

GUAREA. 489.

trichilioides (pl.).

GUERIA, sphalm. = QUERIA.
 GUETTARDA. 1121.
 speciosa. 2.
 GUILLANDINA. 531.
 Bonduc. 1.
 Bonducella.
 dioica.
 Moringa. 1.
 Nuga.
 GUNDELIA. —.
 Tournefortii.
 GUNNERA. 1063.
 perpensa.
 GUSTAVIA. 863.
 Augusta.
 GYPSOPHILA. 579.
 aggregata = *Arenaria*
 tetraquetra.
 altissima. 1.
 fastigiata. 1.
 muralis. 1.
 paniculata. 1.
 perfoliata. 1.
 prostrata. 2.
 repens. 1.
 rigida. 1.
 Saxifraga. 3.
 Struthium.
 tomentosa. 3.
 HAEMANTHUS. 408.
 capensis.
 carinatus.
 ciliaris. 3.
 coccineus.
 puniceus. 1.
 HAEMATXYLUM. 538.
 campechianum. 1.
 HALESLA. 616.
 carolina = *tetraptera*.
 diptera. 3.
 tetraptera. 3.
 HALLERIA. 778.
 lucida. 1.
 HAMAMELIS. 169.
 virginiana. 1.
 — var. *carolina* =
 Fothergilla *Gardeni*.
 virginica = *praec.*

HAMELLIA. 234.
 patens.
 HARTOGIA. —
 capensis = *Diosma*
 capensis.
 ciliaris = *Diosma*
 ciliata.
 imbricata = *Diosma*
 imbricata.
 lanceolata = *Diosma*
 lanceolata.
 pulchella = *Diosma*
 pulchella.
 HASSELQUISTIA. 348.
 aegyptiaca. 3.
 cordata [*Jacq.*].
 orientalis sphalm. =
 aegyptiaca.
 HEBENSTRETIA. 788.
 capitata. MS.
 ciliata [*Berg.*].
 cordata. 3.
 dentata. 3.
 integrifolia.
 HEDERA. 280.
 Helix. 1.
 quinquefolia. 1.
 HEDIOSMA. MS. 728. [= *NEPETA.*]
 HEDYOTIS. 123.
 Auricularia. 3.
 fruticosa. 1.
 graminifolia. Suppl.
 herbacea.
 maritima. Suppl.
 HEDYSARUM. 921.
 Alhagi. 1.
 alpinum. 1.
 argenteum. (m. L. f.)
 barbatum. 3. (m. Sol.)
 biarticulatum. 3.
 bupleurifolium.
 canadense. 1.
 canescens. 1. (m. Sol.)
 Caput-galli. 1.
 cornutum.
 coronarium. 1.
 crinitum. 3.
 Crista-galli.

HEDYSARUM :—

- diphyllum. 1. —
 Ecastaphyllum. 3.
 flexuosum. 1.
frutescens.
 gangeticum. 1.
 grandiflorum, MS. =
 argentatum.
 hamatum. 3. (m. Sol.)
 heterocarpon. 1.
 hirtum. 1.
 humile.
 imbricatum. Suppl.
iunceum.
 lagopodioides. 3.
 latebrosum.
 lineatum. 3.
 linifolium. Suppl.
 maculatum. 1.
 marilandicum. 1.
moniliferum.
nudiflorum.
nummularifolium.
 obscurum. 3.
 Onobrychis. 1.
 paniculatum. 3.
prostratum.
 pulchellum. 1.
 pumilum.
renifolium = seq.
 reniforme. 3.
 repens. 2.
 retroflexum. 3.
retrofractum, sphalm. =
 praec.
 saxatile. 3.
 sororium.
Spartium.
 spinosissimum. 1.
spinosum = cornutum.
 strobiliferum. 3.
 styracifolium. 3. (m.
 L. f.)
 triflorum. 1.
 triquetrum. 1.
 umbellatum. 1.
 vaginale. 3.
 viminaceum. MS.
 violaceum. 1.
 virginicum.

HEDYSARUM :—

- viridiflorum.
viscidum.
volubile.

HEISTERIA. —

- coccinea*.

HELENium. 1005.

- autumnale. 1.

HELIANTHUS. 1024.

- altissimus. 3.
 angustifolius. 1.
 annuus. 1.
atrorubens.
 decapetalus. 1.
 divaricatus. 1.
 frondosus. 2.
 giganteus. 1.
indicus.
 laevis. 3.
 multiflorus. 1.
 stramosus. 1.
 tuberosus. 1.

HELICONIA. 286.

- Bihai.

- nova [= *H. psittacorum*,
Linn. f.].

- pumila = praec.

HELIOTERES. 1074.

- angustifolia.
apetala.
baruensis.
carthaginensis.
 Isora. 1.
pentandra.

HELIOCARPUS. 627.

- americana*.

HELIOPHILA. 840.

- coronopifolia.
 flava. Suppl.
 integrifolia. 3.
 pinnata. Suppl.

HELIOTROPium. 179.

- arborescens*.
 barbadense. MS.
 curassavicum. 1. (m.
 Sol.)
 europaeum. 1.
 fruticosum. 3.
 gnaphalodes. 3. (m.
 Sol.)

HELIOTROPIMUM :—

- indicum. 1. (m. Sol.)
- orientale. 1.
- parviflorum.
- peruvianum. 3.
- supinum. 1.

HELLEBORUS. 718.

- foetidus. 1.
- hyemalis. 1.
- niger. 1.
- trifolius. 1.
- viridis. 1.

HELONIAS. 471.

- asphodeloides. 3.
- bullata. 1.
- minuta.

HELVELLA. 1284.

- Mitra. (m. Ehrh.)
- pineti.

HEMEROCALLIS. 446.

- flava. 3.
- fulva. 3.
- Liliastrum* = *Anthericum Liliastrum*.
- Lilioasphodelus* = *fulva*.
- var. *flavus*.
- var. *fulvus*.

HEMIMERIS. 772.

- diffusa. Suppl.
- montana. Suppl.
- sabulosa. Suppl.

HEMIONITIS. 1248.

- lanceolata. 3. (m. Sol.)
- palmata. 3.
- parasitica. 3. (m. Sol.)

HERACLEUM. 352.

- alpinum*.
- angustifolium*.
- austriacum*.
- elegans*.
- longifolium*.
- Panaces*. 1.
- sibiricum*. 1.
- Sphondylium*. 3.

HERMANNIA. 854.

- alnifolia*. 1.
- althaeifolia*. 1.
- denudata*. Suppl.
- grossularifolia*.

HERMANNIA :—

- hyssopifolia*. 1.
- lavandulifolia*.
- linifolia* [Burm. f.].
- pinnata* = *Mahernia*
- pinnata*.
- trifoliata*.
- triphylla*.
- trifurcata*. 3.

HERMAS. 1227.

- capitata*. Suppl.
- depauperata*. (m. L. f.)
- gigantea*. Suppl.

HERNANDIA. 1104.

- ovigera*.
- Sonora*. 1.

HERNIARIA. 312.

- fruticosa*. 2.
- glabra*. 1.
- hirsuta*. 1.
- lenticulata*. 3.
- Paronychia* = *Illecebrum*
- Paronychia*.

HESPERIS. 841.

- africana*. 1.
- dentata* = *Sisymbrium*
- bursifolium*.
- inodora*. 3.
- lacera*. (cf. *Cheiranthus*
- lacerus*.)
- matronalis*.
- var. *sibirica* =
- sibirica*.
- provincialis*.
- sibirica*. 1.
- tristis*. 1.
- verna*. 1.

HEUCHERA. 325.

- americana*. 1. (pl.)

HIBISCUS. 875.

- Abelmoschus*.
- aethiopicus*.
- brasiliensis*.
- cancellatus*. Cf. Suppl.
- cannabinus*.
- clypeatus*.
- erecta*. MS.
- esculentus*. 2.
- ficulneus*. 1.

HIBISCUS :—

- fraternus.
 hirsutissimus. MS.
 [=urens, *Linn. f.*]
 hirtus. 1.
 Malvaviscus. 1.
 Manihot. 1.
 Moscheutos. 1.
 micranthus. Suppl.
 mutabilis.
palustris.
pentacarpos.
 populneus. 1.
 Rosa-sinensis. 1.
 Sabdariffa. 1.
 salicifolius.
simplex.
sororius.
 spinifex.
 surattensis. 1.
 syriacus. 1.
 tiliaceus. 1.
 Trionum. 1.
 virginicus.
 vitifolius. (m. L. f.)
 zeylanicus. (m. L. f.)

HIERACIUM. 954.

- alpinum. 1.
 amplexicaule.
 aurantiacum. 1.
 Auricula. 1.
 blattarioides.
capense.
 cerinthoides. 1.
chondrilloides.
cymosum.
 dubium. 3.
glutinosum.
 Gmelini. 1.
 Gronovii. 1.
hedyppnoides.
hybridum.
incanum.
 Kalmii. 1.
Leontodontis.
 lyratum. 1.
 murorum. 1.
 — var. *myophorum.*
 — var. *pilosissimum.*

HIERACIUM :—

- murorum* var. *sylvaticum.*
 paludosum. 1.
 paniculatum. 1.
 Pilosella. 1.
 porrifolium. 3.
 praemorsum. 1.
 pumilum.
pyrenaicum.
 — var. *austriacum.*
 — var. *blattarioides.*
 — var. *helveticum.*
 — var. *pilosum.*
 sabaudum. 3.
 sanctum. 3.
 Sprengerianum. 1.
 Taraxaci. 3.
tomentosum = *Andryala*
lanata.
 umbellatum. 3.
venosum.
 villosum.

HILLIA. —

- parasitica* [Jacq.].

HIPPIA. 1039.

- absinthoides. MS.
 americana. MS.
 frutescens.
 pectinifolius. MS.

HIPPOCRATEA. —

- volubilis.*

HIPPOCREPIS. 919.

- comosa. 1.
 multisiliquosa. 1.
 unisiliquosa.

HIPPOMANE. 1146.

- biglandulosa.*
glandulosa.
 Mancinella. 3.
spinosa.
 Zeocca. MS.

HIPPOPHAE. 1168.

- canadensis. 1.
 Rhamnoides. 1.

HIPPURIS. 11.

- vulgaris.* 1. (pl.)

HIRAEA. —

- reclinata* [Jacq.].

- HIRTELLA.** —
americana.
HOLCUS. 1212.
bicolor.
halepensis. 1.
lanatus. 1.
lappaceus. MS.
latifolius.
laxus. 1.
mollis. 3.
niger. MS.
odoratus. 1.
pertusus.
saccharatus.
serratus. Suppl.
Sorghum. 3.
spicatus. 3.
striatus. 1.
HOLOSTEUM. 109.
cordatum. 1.
hirsutum.
succulentum.
umbellatum. 1.
HOPEA. 942.
tinctoria.
HORDIUM. 103.
bulbosum. 3.
distichon.
hexastichon.
jubatum. 1.
murinum. 1.
nodosum. 3.
vulgare. 1.
Zeocriton. 1.
HORMINUM. 747.
pyrenaicum. 3.
virginicum. (cf. *Salvia*
purpurea.)
HOTTONIA. 204.
indica. 3.
palustris (pl.).
HOUSTONIA. 128.
caerulea. 3.
purpurea. 3.
HUDSONIA. 622.
ericoides (pl.).
HUGONIA. 857.
Mystax (pl.).
HUMULUS. 1178.
Lupulus. 1.
- HURA.** 1144.
crepitans. 3.
HYACINTHUS. 438.
amethystinus. 2.
botryoides. 1.
cernuus. 1.
comosus. 1.
corymbosus. (m. L. f.)
lanatus.
monstruosus. 1.
Muscari. 1.
non-scriptus. 1.
orchioides.
orientalis. 3.
pusillus. MS.
racemosus. 3.
romanus.
serotinus. 1.
viridis. 3.
HYDNUM. 1281.
auriscalpium. (m. Ehrh.)
imbricatum.
parasiticum.
repandum.
tomentosum.
HYDRANGÆA. 573.
arborescens.
HYDRASTIS. 720.
canadensis. 3.
HYDROCHARIS. 1189.
Morsus-ranae. 1.
HYDROCOTYLE. 332.
americana. 1.
asiatica. 1.
chinensis. 1.
cordifolia. MS.
erecta. Suppl.
ranunculoides. Suppl.
thelygonoides. MS.
umbellata. 1.
villosa. Suppl.
vulgaris. 1.
HYDROLEA. —
spinosa.
HYDROPHYLLUM. 205.
canadense. 3.
virginianum = seq.
virginicum. 3.
HYMENÆA. 526.
Courbaril. 3.

HYOBANCHE. 799.*sanguinea* (pl.).**HYOSCYAMUS. 244.**

albus. 1.

aureus. 3.

Belladonnae.

muticus.

niger. 1.

physaloides. 1.

pusillus. 1.

*reticulatus.**Scopolia* (pl.).**HYOSERIS. 957.**

cretica. 1.

foetida.

Hedypnois. 1.

lucida. 3.

minima. 3.

radiata. 1.

Rhagadioloides. 1.

scabra. 3.

virginica. 1.

HYPECOM. 171.*erectum.*

pendulum. 1.

procumbens. 1.

HYPERICUM. 943.*aegypticum.*

Androsæmum. 1.

Ascyron. 1.

bacciferum.

balearicum. 1.

barbatum.

calycinum. 3.

canadense. 3.

canariense. 1.

cayanense.

*chinense.**Coris.*

crispum. 3.

elodes. 3.

*ericoides.**guineense.*

hircinum. 1.

hirsutum. 1.

humifusum. 1.

Kalmianum. 1.

Lasianthus = *Gordonia**Lasianthus.***HYPERICUM:—**

mexicanum. (m. L. f.)

monogynum. 3.

montanum. 3.

*mutilum.**nummularium.*

olympicum. 1.

orientale. 3.

perfoliatum.

perforatum. 1.

petiolatum.

prolificum. 3.

pulchrum.

quadrangulum. 1.

repens. 3.

sanguineum. MS.

scabrum. 3.

setosum.

tomentosum. 3.

virginicum. 3.

HYPNUM. 1266.

abietinum. 1.

acacioides.

adiantoides. 1.

aduncum.

*alopecurum.**bryoides.*

clavatum. MS.

clavellatum.

complanatum. 1.

compressum.

crispum. 1.

cupressiforme.

Crista-castrensis.

curtipendulum. 1.

cuspidatum. 1.

delicatulum.

dendroides.

denticulatum.

filicifolium = *filifolium.*

filicinum.

filifolium.

fluitans. (m. L. f.)

*gracile.**illicebrum.**julaceum.**loreum.*

lucens.

mysosuroides.

HYPNUM :—

ornithopodioides.
palustre.
parietinum. 1.
plumosum.
praelongum.
proliferum.
purum. (m. Sol.)
riparium.
rugosum.
ruscifolium. MS.
rutabulum.
sciuroides.
scorpioides. 1.
sericeum. 2.
serpens.
spiniforme.
squarrosum. 1.
sylvaticum.
taxifolium. 1.
triquetrum.
undulatum. 1.
velutinum. 1.
viticulosum.

HYPOCHAERIS. 959.

Achyrophorus = *Seriola*
aethnensis.
glabra. 1.
maculata. 1.
pontana.
radicata. 1.
urens.

HYPOXIS. 427.

alba. Suppl.
decumbens. 3.
erecta. 3.
fascicularis.
minuta. Suppl.
plicatilis. Suppl.
 (plicata).
serrata. Suppl.
sessilis.
striata. MS.

HYSSOPUS. 725.

Lophanthus. 1.
nepetoides. 1.
officinalis. 1.

IBERIS. 827.

amara. 3.

IBERIS :—

arabica. 3.
cretica.
gibraltarica.
linifolia. 3.
nudicaulis. 1.
odorata.
pinnata. 3.
rotundifolia. 1.
saxatilis. 3.
semperflorens. 3.
sempervirens.
umbellata. 1.

IGNATIA. 251.

nova = *amara*, Linn. f.

ILEX. 173.

Aquifolium. 1.
asiatica.
Cassine. 1.
cuneifolia.
Dodonaea.

ILLECEBRUM. 290.

Achyrantha. 3.
arabicum. 3.
alsinefolium. 3.
benghalense.
brachiatum.
capitatum. 1.
cymosum. 1.
ficoideum. (m. Sol.)
javanicum.
lanatum.
Monsoniae. Suppl.
Paronychia. 1.
polygonoides.
sanguinolentum.
sessile. 3.
suffruticosum. 1.
vermiculatum. 3.
verticillatum. 1.

ILLICIAM. 704.

acudentata. MS.
anisatum.
floridanum.

IMPATIENS. 1053.

Balsamina. 1.
chinensis. 1.
cornuta.
latifolia. 3.
Noli-tangere. 1.

IMPATIENS :—

oppositifolia.
triflora.

IMPERATORIA. 366.

Ostruthium. 2.

INDIGOFERA. 923.

angustifolia.
Anil.
argentea.
cytisoides. 3.
disperma.
enneaphylla.
glabra.
hirsuta.
mexicana. Suppl.
pentaphylla.
procumbens.
psoraloides. 3.
racemosa = *praec.*
sericea.
tinctoria. 1.
tomentosa. MS.
trifoliata. 3.

INULA. 999.

aestuans.
arabica. 3.
aromatica. 3.
bifrons = *Conyza bifrons.*
Britannica. 2.
caerulea = *Aster polifolius.*
crithmifolia = *seq.*
crithmoides. 1.
dysenterica. 1.
ensifolia. 3.
foetida. 3.
germanica. 1.
Helenium. 1.
hirta. 1.
indica. 3.
mariana. 3.
montana.
myrtifolia.
Oculus-Christi. 1.
odora. 1.
pinifolia.
provincialis.
Pulicaria. 1.
salicina. 1.

INULA :—

spiræifolia. 3.
squarrosa. 3.
Tricis.
undulata. 3.
villosa.

IPOMOEA. 219.

aegyptia = *Convolvulus pentaphyllus.*
alba.
Bona-nox. 3.
campanulata. 1.
carnea.
carolina.
coccinea. 1.
digitata.
glaucifolia.
hastata.
hederifolia.
hepaticæfolia.
lacunosa.
muricata [Jacq.].
Nyctelea = *Ellisia Nyctelea.*
Pes-tigridis. 1.
Quamoclit. 1.
quinquefolia = *Convolvulus quinquefolius.*
repanda.
rubra.
serpens. MS.
solanifolia.
tamniifolia.
triloba. 1.
tuberosa. 1.
umbellata.
verticillata.
violacea.

IRESINE. 1175.

Celosia = *seq.*
celosioides.

IRIS. 61.

aphylla.
biflora. 1.
florentina.
foetidissima. 1.
germanica. (m. L. f.)
graminea. 3.
martinicensis.

IRIS :—

- ochroleuca. (m. L. f.)
 persica. 3.
 Pseud-acorus. 1.
 pumila. 1.
pyrenaica.
sambucina.
 sibirica. 1.
Sisyrinchium.
 spuria. 3.
squalens.
 susiana. 3.
 tenuifolia [Pall].
 tuberosa.
 variegata. (m. L. f.)
 verna. 3.
versicolor.
 virginica. 3.
Xiphium.

ISATIS. 848.

- aegyptia.*
armena.
 lusitanica. 1.
 tinctoria. 1.

ISCHAEMUM. 1214.

- aristatum. 1.
 murinum [Forst].
 muticum. 1.

ISNARDIA. 157.

- palustris. 1.
 ramosior. MS.

ISOËTES. 1256.

- lacustris. 1.

ISOPYRUM. 717.

- aquileioides.*
fumarioides. 1.
thalictrioides.

ITEA. 273.

- virginica. 1.

IVA. 1116.

- absinthoides* = *Hippia*
absinthoides.
 annua. 1.
 frutescens. 1.

IXIA. 58.

- africana.*
alba.
 bulbifera. 3.
Bulbocodium. 3.

IXIA :—

- chinensis. 3.
 corymbosa. 3.
 crocata. 3.
 discolora. MS.
flexuosa.
hirsuta = *Wachendorfia*
umbellata.
 lacera. MS.
 maculata. 3.
 pendula. MS.
plicata = *Gladiolus pli-*
catus.
 paniculata. MS.
 polystachya. 3.
rosea.
 scillaris. 3.
 trimaculata. MS.
umbellata = *Wachen-*
dorfia umbellata.
 uniflora. 3.

IXORA. 132.

- alba.*
 americana. 3.
 coccinea. 2.
occidentalis.

JACQUINIA. —

- armillaris.*
linearis.
ruscifolia.

JAMBOLIFERA. —

- pedunculata.*

JASIONE. 1050.

- montana. 3.

JASMINUM. 17.

- azoricum. 1.
 fruticans. 1.
 grandiflorum. 3.
 humile. 1.
 odoratissimum. 1.
 officinale. 1.

JATROPHA. 1141.

- Curcas. 1.
 elastica. Suppl.
 gossypifolia. 1.
herbacea.
Janipha.

JATROPHA :—

- Manihot. 3.
- moluccana. 3.
- multifida. 3.
- urens. 1.

JUGLANS. 1129.

- alba.
- baccata.
- cinerea.
- nigra. 1.
- regia. 1.

JUNCUS. 449.

- acutus. 1.
- articulatus. 1.
- var. *aquaticus*.
- var. *sylvaticus*.
- biglumis. 1.
- bufonius. 1.
- bulbosus. 1.
- campestris. 1.
- conglomeratus. 1.
- effusus. 1.
- filiformis. 1.
- glomeratus*, MS. (2) =
conglomeratus.
- glomeratus*, MS. (15) =
spicatus.
- Jacquini.
- inflexus*.
- niveus. 3.
- nodosus. 3.
- pilosus. 1.
- punctarius. Suppl.
- spicatus*.
- squarrosus. 3.
- stygius. 3.
- trifidus. 1.
- triglumis. 1.

JUNGERMANNIA. 1267.

- albicans.
- alpina. (m. L. f.)
- asplenioides. 2.
- bicuspidata*.
- bidentata. (m. L. f.)
- ciliaris.
- complanata. (m. L. f.)
- dilatata.
- epiphylla.
- furcata.

JUNGERMANNIA :—

- julacea*.
- lanceolata*.
- multifida*.
- multiflora*.
- nemorea* = seq.
- nemorosa.
- pinguis. (m. Ehrh.)'
- platyphylla. (m. L. f.)
- polyanthos*.
- pusilla. (m. Ehrh.)
- quinquedentata*.
- reptans.
- resupinata.
- rupestris.
- Tamarisci* = seq.
- tamariscifolia.
- trichophylla. (m. Ehrh.)
- trilobata.
- undulata [ap. Hypnum].
- varia*.
- viticulosa*.

JUNGIA. 1046.

- ferruginea*.

JUNIPERUS. 1198.

- barbadensis.
- bermudiana.
- chinensis. 3.
- communis. 3.
- lycia*.
- Oxycedrus*. 1.
- phoenicea. 3.
- Sabina. 1.
- thurifera*.
- virginiana. 1.

JUSSIEUA. 552.

- adscendens*.
- erecta. 2.
- peruviana*.
- pubescens.
- repens.
- suffruticosa* = praec.
- tenella*.

JUSTICIA. 28.

- Adhatoda. 1.
- assurgens. 3.
- Betonica*.
- bivalvis. 3.
- carthaginensis*.

JUSTICIA :—

- chinensis. 1.
 Echolium. 3.
echioides.
 fastuosa.
 gangetica. 3.
 hyssopifolia. 1.
 infundibuliformis. 3.
 nasuta. 1. (m. L. f.)
 paniculata. MS.
 pectinata. 3.
 picta. 3.
 procumbens. 1.
 purpurea. 1.
 repens. 3. (m. L. f.)
scorpioides.
sessilis.
 sexangularis. 1.
spinosa.

KAEMPFERIA. 8.

- Galanga. 1.
rotunda.

KALMIA. 560.

- angustifolia. 1.
 latifolia. 1.

KIGGELARIA. 1191.

- africana. 1.

KLEINHOVIA. 1073.

- hospita* (pl.).

KNAUTIA. 121.

- orientalis. 1.
 palaestina.
 plumosa.
 propontica. 3.

KNOXIA. —

- scandens = Clerodendrum scandens.
zeylanica.

KOENIGIA. 110.

- islandica. 3.

KRAMERIA. —

- Ixina*.

KUHNIA. 238.

- eupatorioides* (pl.).

KYLLINGA. 69.

- monocephala* = Schoenus coloratus.

KYLLINGA :—

- triceps* = Schoenus niveus.

LACHENALIA. 405.

- tricolor* [Jacq.].

LACHNAEA. —

- conglomerata*.
eriocephala.

LACTUCA. 950.

- canadensis. 1.
 indica.
 perennis. 1.
 quercina. 1.
 saligna. 1.
 sativa. 1.
 — var. *capitata*.
 — var. *crispa*.
 Scariola. 3.
Serriola = praec.
 virosa. 1.

LAETIA. 680.

- americana*.
apetala.
 completa. 3.
Thamnia.

LAGERSTROEMIA. 684.

- indica. 3.

LAGOECIA. 282.

- cuminoides. 1.

LAGURUS. 96.

- cylindricus.
 ovatus. 1.

LAMIAM. 733.

- album. 1.
 amplexicaule. 1.
garganicum = L. Orvala.
 laevigatum. 3.
 maculatum. 3.
multifidum.
 Orvala. 3.
 purpureum. 1.

LANTANA. 783.

- aculeata. 1.
 africana. 1.
 annua. 1.
bullata = Varronia bullata.

LANTANA :—

- Camara. 1.
- corymbosa* = Varronia
- lineata.
- involutrata. 3.
- mista.
- odorata. 3.
- salvifolia. 3.
- trifolia. (trifoliata, m.
L. f.)

LAPSANA. 960.

- capillaris*.
- chondrilloides*.
- communis. 1.
- Rhagadiolus. 1.
- stellata. 1.
- Zacintha. 1.

LASERPITIUM. 351.

- angustifolium*.
- aquilegifolium* [Jacq.].
- Chironium*.
- ferulaceum. 3.
- gallicum. 3.
- latifolium. 3.
- nanum. MS.
- peucedanoides. 3. (m.
L. f.)
- prutenicum. 3.
- Siler. 2.
- simplex*.
- trilobum. 3.

LATHRAEA. 761.

- Anblatum*.
- Clandestina. 1.
- Phelypaea*.
- Squamaria. 2.

LATHYRUS. 905.

- amphicarpus. 1.
- angulatus. 1.
- annuus. 3.
- Aphaca. 3.
- articulatus. 1.
- bithynicus* = *Vicia bithy-*
nica.
- Cicera. 1.
- Clymenum. 1.
- heterophyllus. 1.
- hirsutus. 1.
- inconspicuus. 1.

LATHYRUS :—

- latifolius. 1.
- Nissolia. 1.
- odoratus. 1.
- palustris. 1.
- pisiformis. 1.
- pratensis. 1.
- sativus. 1.
- setifolius. 1.
- sylvestris. 1.
- tiugitanus. 1.
- tuberosus. 1.

LAUGERIA. 256.

- odorata. 3.

LAURUS. 518.

- aestivalis. 1.
- Benzoin. 2.
- Borbonia. 3.
- Camphora. 1.
- Cassia. 1.
- Cinnamomum. 3.
- Chloroxylon. 3.
- Culilaban*.
- indica. 1.
- nobilis. 1.
- Persea*.
- Sassafras. 1.
- Winterana* = Winterania
- Canella.

LAVANDULA. 727.

- dentata. 1.
- multifida. 1.
- Spica. 1.
- Stoechas. 1.

LAVATERA. 871.

- americana. 3.
- arborea. 1.
- cretica. 1.
- lusitanica*.
- micans*.
- olbia. 3.
- thuringiaca. 1.
- triloba. 1.
- trimestris. 1.

LAWSONIA. 496.

- inermis. 3.
- spinosa. 1.

LECHIA. 115.

- major. 1.

LECHIA :—

minor. 1.

LECYTHIS. 682.

minor.

Ollaria.

LEDUM. 561.

palustre. 1.

LEEAE. 1118.

aequata. 3.

crispa. 3.

LEMNA. 1093.

*arrhiza.**gibba.*

minor. 1.

*polyrhiza.**trisulca.* 1.

LEONTICE. 433.

*Chrysogonum.**Leontopetaloides.**Leontopetalum.* 1.*thalictroides.* 1.

LEONTODON. 953.

aureum. 3.

autumnale. 1.

*bulbosum.**Dandelion.**dentatum.**hastile.*

hirtum. 3.

hispidum. 1.

*lanatum.**Taraxacum.* 1.

tomentosum. Suppl.

tuberosum. 3.

LEONURUS. 739.

Cardiaca. 1.

indicus.

Marrubiastrum. 1.

sibiricus.

tataricus.

LEPIDIUM. 824.

alpinum.

bonariense.

Cardamines. 3.

chalepense.

didymum. 3.

Draba = *Cochlearia**Draba.*

graminifolia. 3.

LEPIDIUM :—

Iberis. 1.*latifolium.* 1.*lyratum.**Nasturtium.* MS.

nudicaule. 1.

perfoliatum. 1.

petraeum. 1.

procumbens. 2.

ruderales. 1.

sativum. 1.

spinosum.

subulatum. 1.

*suffruticosum.**vesicarium.**virginicum.* 1.

LERCHEA. 851 a.

longicauda.

LEUCADENDRON. —

*acaulon.**cancellatum.**Conocarpodendron.**cucullatum* = *Protea cucullatum.**cyanooides* = *Protea cyanooides.**cynaroides* = *Protea cynaroides.**glomeratum* = *Protea glomerata.**hirtum* = *Protea hirta.**Hypophyllocarpodendron* = *Protea Hypophyllocarpodendron.**Lepidocarpodendron* = *Protea Lepidocarpodendron.**pinifolium* = *Protea pinifolia.**proteoides* = *Protea purpurea.**racemosum* = *Protea racemosum.**repens* = *Protea repens.**Scolymocephalum.**Serraria* = *Protea Serraria.**speciosum* = *Protea speciosa.*

LEUCOJUM. 410.

- aestivum. 3.
- autumnale. 1.
- vernum. 1.

LEYSERA. 1008.

- Callicornia*.
- gnaphalodes. 3.
- paleacea. 3.

LICHEN. 1273.

- ampullaceus*.
- aphthosus. 1.
- aquatilis*.
- arcticus. 1.
- articulatus*.
- atro-albus*.
- atro-virens*.
- barbatus. 3.
- Burgessii. (m. L. f.)
- byssoides. (m. Ehrh.)
- calcareus*.
- calicaris. 1.
- candelarius.
- caninus. 1.
- caperatus.
- carpineus. 1.
- centrifugus. 1.
- chalybeiformis. 1.
- chrysophthalmus.
- ciliaris.
- cinereus*.
- cocciferus. 1.
- corallinus*.
- cornucopioides.
- cornutus. 1.
- crispus*.
- cristatus*.
- crocatus.
- croceus. 1.
- cylindricus*.
- deformis. 3.
- densius*, sphalm.=seq.
- deustus. 1.
- var. *aquaticus*.
- digitatus. (m. Sol.)
- divaricatus. 3.
- ericetorum. 1.
- fagineus*.
- fahlunensis. 1.
- farinaceus. 1.

LICHEN :—

- fascicularis. (m. L. f.)
- fimbriatus*.
- floridus. 1.
- fragilis. 1.
- fraxineus. 1.
- fuciformis*.
- furfuraceus. 1.
- fusco-ater*.
- gelidus*.
- geographicus*.
- glaucus. 1.
- globiferus. 3.
- gracilis. 1.
- hirtus. 1.
- horizontalis.
- islandicus. 1.
- var. *tenuissimus*.
- jubatus. 1.
- judaicus*.
- juniperinus. 1.
- luteus*.
- lanatus. 1.
- lentiginosus. MS.
- leucomelos. 3.
- miniatus*.
- nivalis. 1.
- olivaceus. 1.
- omphalodes. 2.
- pallens. (m. L. f.)
- Parellus*.
- parietinus. 1.
- paschalis. 1.
- perlatus*.
- pertusus. 3.
- physodes. (m. L. f.)
- plicatus*.
- polyphyllus.
- polyrrhizos. (m. Ehrh.)
- proboscideus. 1.
- Prunastri. 1.
- pubescens.
- pulmonarius. 1.
- pustulatus. 1.
- pyxidatus. 3.
- rangiferinus. 1.
- var. *alpestris*.
- var. *sylvaticus*.

LICHEN:—

- resupinatus*. 1.
- Roccella*. 1.
- rugosus*.
- rupicola*.
- saccatus*. 3.
- sanguinarius*. 1.
- saxatilis*. 1.
- scriptus*. (m. L. f.)
- stellaris*. 3.
- stygius*. 3.
- subfuscus*. 3.
- subulatus*. 3.
- sylvaticus*.
- tartareus*. (m. L. f.)
- uncialis*. 1.
- upsaliensis*. 1.
- Usnea*. 3.
- velleus*. 1.
- venosus*. 1.
- ventosus*.
- vernalis*.
- verrucosus*. Suppl.
- vulpinus*. 1.

LIGUSTICUM. 353.

- austriacum*.
- balearicum*.
- cornubiense*.
- Levisticum*.
- peloponnesiacum*. 1.
- peregrinum*.
- scoticum*. 1.

LIGUSTRUM. 18.

- vulgare*. 1.

LILIUM. 420.

- bulbiferum*. 1.
- camtschatcense*.
- canadense*. 1.
- candidum*. 1.
- chalcedonicum*. 1.
- Martagon*.
- persicum*.
- philadelphicum*. 3.
- pomponium*. 1.
- superbum*.

LIMEUM. 477.

- africanum*. 3. (m. L. f.)

LIMODORUM. 1058.

- altum*. 3.

LIMODORUM:—

- tuberosum*. 3.

LIMONIA. 550.

- acidissima*. (cf. *trifoliata*.)
- monophylla*.
- trifoliata*.

LIMOSELLA. 794.

- aquatica*. 1.
- diandra*.

LINCONIA. 323.

- aloppecuroidea* (pl.).

LINDERNIA. 796.

- gratioloides*. MS.
- Pyxidaria*.

LINNÆA. 792.

- borealis*. 1.

LINUM. 396.

- africanum*.
- alpinum*. 3.
- arboreum*.
- austriacum*. 1.
- campanulatum*. 3.
- catharticum*. 1.
- flavum*. 1.
- gallicum*.
- hirsutum*. 1.
- maritimum*. 2.
- narbonense*.
- nodiflorum*. 3.
- perenne*. 1.
- procumbens*. MS.
- quadrifolium*. 1.
- Radiola*. 1.
- strictum*. 1.
- suffruticosum*.
- tenuifolium*. 1.
- trigynum* = *gallium*.
- usitatissimum*. 1.
- verticillatum*.
- virginianum*. 1.
- viscosum*.

LIPARIA. 910.

- graminifolia*.
- opposita*.
- sericea*.
- sphaerica*.
- umbellata*.

LIPARIA :—

villosa = *Borbonia tomentosa*.

LIPPIA. 801.

americana. 1.
hemisphaerica.
ovata. 3.

LIQUIDAMBAR. 1134.

asplenifolia = seq.
peregrina. 3.
styraciflua. 1.

LIRIODENDRON. 705.

lilifera.
Tulipifera. 1.

LISIANTHUS. 213.

cordifolius. 3.
longifolius.

LITHOSPERMUM. 181.

aegyptiacum. (m. L. f. ?
= *tenuiflorum*, Suppl.)

arvense. 1.
dispermum. 3.
fruticosum. 1.
officinale. 1.
orientale. 3.
purpureocaeruleum. 1.
[*purpureum*.]

tinctorium = *Anchusa*
tinctoria.

virginianum. 1.

virginicum = *praec.*

LITTORELLA. 1107.

lacustris.
uniflora. MS.

LOASA. 688.

hispida.

LOBELIA. 1051.

assurgens. 3.
bellidifolia, MS. [= *bellidiflora*, Suppl.]

bulbosa. 3.

Cardinalis. 1.

Cheiranthus = *Manulea*
Cheiranthus.

Cliffortiana. 1.

comosa = *triquetra*.
cornuta.

coronopifolia.

debilis. Suppl.

LOBELIA :—

Dortmanna. 1.

elongata. MS.

erinoides. 3.

Erinus. 3.

hirsuta.

hirta.

inflata. 1.

Kalmii. 1.

Laurentia. 3.

longiflora. 3. (m. Sol.)

lutea. 3.

minima. MS.

minuta.

obscura.

Oederia. MS.

paniculata.

Phyteuma.

pinifolia. 3.

Plumieri = *Scaevola*

Lobelia.

simplex.

surinamensis.

syphilitica. 1.

tenella. 3.

Trapa = *L. Tupa*.

triquetra. 3.

Tupa.

urens. 3.

zeylanica. 3.

LOEFFLINGIA. 54.

hispanica. 1.

LOESELIA. —

ciliata.

LOLIUM. 99.

distachyon.

perenne. 1.

temulentum. 1.

tenuë. 3.

LONCHITIS. 1249.

aurita.

hirsuta.

pedata. 3. (m. Sol.)

repens.

LONICERA. 235.

alba = *Chiococca racemosa*.

alpigena. 1.

caerulea. 1.

LONICERA :—

- Caprifolium. 1.
corymbosa.
 Diervilla. 1.
 dioica. 3.
marilandica = *Spigelia*
marilandica.
nigra.
parasitica.
 Periclymenum. 1.
 pyrenaica. 1.
 sempervirens. 1.
 Symphoricarpos. 1.
 tatarica. 2.
 Xylosteum.

LORANTHUS. 455.

- americanus.*
 europaeus. 3.
lonicerioides.
occidentalis.
 pentandrus. 3.
 Scurrula. 3.
spicatus [Jacq.].
Stelis.
uniflorus [Jacq.].

LOTUS. 931.

- angustissimus. 1.
 arabicus. 3.
 conjugatus. 1.
 corniculatus. 1.
 — var. *tenuifolius.*
 creticus. 1.
 cytisoides. 1.
 Dorycnium. 1.
 edulis. 3.
erecta = *siliquosus.*
fruticosus = *Borbonia*
tomentosa.
 graecus. 3.
 hirsutus. 1.
 Jacobaeus. 1.
 maritimus. 1.
 mauritanicus. 3.
 ornithopodioides. 1.
peregrinus.
 prostratus. 3.
 rectus. 1.
 siliquosus.
 Tetragnolobus. 1.

LOTUS :—

tetraphyllus.

LUDWIGIA. 154.

- alternifolia. 1.
 erigata.
oppositifolia.
perennis.

LUNARIA. 832.

- annua. 3.
 rediviva. 1.

LUPINUS. 898.

- albus. 1.
 angustifolius. 1.
 hirsutus. 1.
integrifolius.
 luteus. 1.
 perennis. 1.
pilosus.
stoloniferus = *hirsutus.*
 varius. 1.

LYCHNIS. 602.

- alpestris, (m. L. f.)
 alpina. 1
 apetala. 1.
 chalcidonica. 1.
 dioica. 1.
Flos-cuculi.
inaperta.
quadridentata = *Silene*
quadrifida.
 sibirica. 1.
 Viscaria. 1.

LYCIUM. 259.

- afrum. 1.
 album.
 barbarum. 1.
 capsulare. 3.
 europaeum. 3.

LYCOPERDON. 1287.

- aurantium.*
Bovista.
cancellatum.
 carcinomatis. Suppl.
Carpobolus.
cervinum.
Epidendrum.
epiphyllum.
 parasiticum. MS.
pedunculatum.

LYCOPERDON :—

- pisiforme.*
- pistillare.*
- radiatum.*
- stellatum.* (m. Ehrh.)
- truncatum.*
- Tuber.*
- variolosum.*

LYCOPodium. 1257.

- alopecurioides.* 1.
- alpinum.* 1.
- annotinum.*
- apodum.* 1.
- Bryopteris.*
- canaliculatum.*
- carolinianum.*
- cernuum.* 1.
- circinale.*
- clavatum.* 3.
- complanatum.* 1.
- denticulatum.* 1.
- flabellatum.* 1.
- helveticum.*
- inundatum.* 1.
- linifolium.*
- nudum.* 1.
- obscurum.* 1.
- ornithopodioides.* 3.
- Phlegmaria.*
- plumosum.* 3.
- rupestre.* 3.
- sanguinolentum.* 1.
- selaginoides.* 1.
- Selago.* 1.
- var. *minor.*

LYCOPsis. 190.

- aegyptiaca* = *Asperugo*
- aegyptiaca.*
- arvensis.* 1.
- Echioides.*
- orientalis.*
- pulla.* 3.
- variegata.* 1.
- vesicaria.* 1.
- virginica.*

LYCOPUS. 36.

- europaeus.* 1.
- exaltatus.* Suppl.
- italicus.* MS.

LYCOPUS :—

virginicus.

LYGEUM. 75.

Spartum. 2.

LYSIMACHIA. 207.

- atropurpurea.* 1.
- ciliata.* 1.
- Ephemerum.* 1.
- Linum-stellatum.* 1.
- nemorum.* 1.
- Nummularia.* 1.
- punctata.* 3.
- quadrifolia.* 1.
- tenella* = *Anagallis*
- tenella.*
- thyrsiflora.* 1.
- vulgaris.* 1.

LYTHRUM. 626.

- carthaginense* [Jacq.].
- Cuphea.* Suppl.
- fruticosum.* 3.
- Hyssopifolia.* 1.
- lineare.* 2.
- Melanium.*
- Parsonsia.* 3.
- petiolatum.*
- Salicaria.* 1.
- Thymifolia.* 1.
- verticillatum.* 1.
- virgatum.* 1.

MACROCNEUM. 227.

jamaicense. 3. (m. Sol.)

MADREPORA. —

Acetabulum. [= *Acetabularia mediterranea*, Lamour.]

MAGNOLIA. 706.

- acuminata.*
- glauca.* 3.
- grandiflora.*
- tripetala.*
- virginiana.*
- var. *acuminata* =
- acuminata.*
- var. *fœtida* =
- grandiflora.*
- var. *glauca* =
- glauca.*

MAGNOLIA :—

virginiana var. *grisea* =
glauca?

— var. *tripetala* =
tripetala.

MAHERNIA. —

pinnata.
verticillata.

MALACHRA. 867.

capitata. 3.
radiata.

MALLOCOCCA [Forst.].

crenata [Forst.] = Gre-
wia Mallocoeca.

MALOPE. 872.

Malacoides. 1.

MALPIGHIA. 588.

angustifolia. 3.
aquifolia. 3.
banisteroides.
coccigera.
crassifolia. 1.
glabra. 1.
nitida. 3.
obscura.
punicifolia.
urens. 1.
verbascifolia. 1.

MALVA. 870.

abutiloides.
aegyptia. 1.
Alcea. 1.
americana.
bryonifolia. 1.
capensis. 1.
 — var. *scabrosa*.
caroliniana. 1.
coromandeliana. 1.
crispa.
gangetica.
hispanica. 1.
limensis. 3.
mauritiana. 1.
moschata. 3.
parviflora. 2.
peruviana. 1.
rotundifolia. 1.
scabrosa = *capensis*.
scariosa. MS.

MALVA :—

Sherardiana. 3.
spicata. 3. (m. L. f.)
sylvestris. 1.
tomentosa. 1.
Tournefortiana. 3.
verticillata. 1.
 — var. *crispa* = *crispa*.

MAMMEA. 675.

americana. 1.
asiatica. 3.

MANDRAGORA. —

officinarum.

MANETTIA. —

reclinata.

MANGIFERA. 276.

indica. 1.

MANISURIS. 1215.

myurus.

MANULEA. 787.

Cheiranthus. 3.
tomentosa.

MARANTA. 6.

arundinacea. 1.
Galanga.

MARCGRAVIA. 661.

umbellata (pl.).

MARCHANTIA. 1269.

androgyna. 1.
chenopoda. (m. Sol.)
conica. (m. L. f.)
cruciata. (an m.
 Swartz?)
hemisphaerica. 1.
polymorpha. 1. ["poly-
 phylla."]
tenella.

MARGARITARIA. 1187.

alternifolia. MS.
oppositifolia. MS.

MARRUBIUM. 738.

acetabulosum. 3.
africanum. 2.
Alysson. 1.
candidissimum. 1.
crispum. 3.
hispanicum. 1.
peregrinum. 1.
Pseudo-dictamnus. 1.

MARRUBIUM :—

- supinum. 3.
- vulgare. 1.

MARSILEA. 1254.

- minuta.
- natans. 3.
- quadrifolia. 1.
- quadrifoliata* = *praec.*

MARTYNIA. 769.

- annua. 3.
- longiflora.*
- perennis. 1.

MASSONIA. 414.

- latifolia. (nom. sp.
- m. L. f.) Suppl.

MATRICARIA. 1013.

- argentea.*
- asteroides. 3.
- capensis. 3.
- Chamomilla. 3.
- inodora.*
- maritima. 1.
- Parthenium. 1.
- recutita.*
- suaveolens. 3.

MATTHIOLA. —

- scabra.*

MAURITIA. 1290.

- flexuosa. (m. L. f.)
- Suppl.

MEDEOLA. 468.

- aculeata.*
- asparagoides.*
- virginiana. 1.

MEDICAGO. 933.

- arborea. 1.
- circinnata. 1.
- falcata. 1.
- lupulina. 1.
- marina. 1.
- polymorpha.
- var. *arabica.* 2.
- var. *ciliaris.*
- var. *coronata.* 2.
- var. *hirsuta.* 2.
- var. *intertexta.* 2.
- var. *minima.*
- var. *muricata.* 2.
- var. *nigra.*
- var. *orbicularis.* 2.

MEDICAGO :—

- polymorpha.
- var. *rigidula.* 2.
- var. *scutellata.* 2.
- var. *tornata.* 2.
- var. *turbinata.*
- radiata. 1.
- sativa. 1.
- virginica.*

MELALEUCA. 941.

- Leucadendron* (pl.).

MELAMPODIUM. 1034.

- americanum.*
- australe. (m. L. f.)

MELAMPYRUM. 760.

- arvense. 1.
- cristatum. 1.
- memorosum. 1.
- pratense. 1.
- sylvaticum. 1.

MELANTHIUM. 467.

- capense. 3. (m. L. f.)
- ciliatum. MS.
- indicum.*
- malabaricum. MS.
- sibiricum. 1.
- virginicum. 1.
- viride. Suppl.

MELASTOMA. 559.

- Acinodendrum.*
- aspera. 3.
- crispata.*
- discolor. 3.
- grossularioides.*
- grossa. Suppl.
- hirta. 3.
- holosericea. 3.
- laevigata. 3.
- malabathrica.*
- nova* [= *fragilis,*
- Suppl.].
- octandra. 1.
- scabrosa. 3.
- strigosa. Suppl.
- sessilifolia. 3.

MELIA. 543.

- Azadirachta.*
- Azedarach. 1.
- var. *sempervirens.*

MELIANTHUS. 818.

- major. 1.
minor. 1. (m. L. f.)

MELICA. 86.

- altissima. 1.
ciliaris = seq.
ciliata. 1.
caerulea = Aira
caerulea.
falx. Suppl.
minuta. 3.
nutans. 1.
papilionacea. 3.
spectabilis.

MELICOCCA. 488.

- bijuga. 3.

MELISSA. 745.

- Calamintha. 1.
cretica. 3.
fruticosa. 1.
grandiflora. 1.
Nepeta. 1.
officinalis. 1.
pulegioides = Cunila
pulegioides.

MELITTIS. 748.

- Melissophyllum* (pl.).

MELOCHIA. 855.

- concatenata.
corchorifolia. 1. (m.
Sol.)
depressa. 3. (m. Sol.)
pyramidata. 1.
supina.
tomentosa. 3.
trigyna. MS.

MELOTHRIA. 51.

- pendula. 1.

MEMECYLON. 493.

- capitellatum (pl.).

MENAIIS. —

- topiaria.

MENISPERMUM. 1195.

- canadense. 1.
carolinum.
Cocculus.
crispum.
flavum.
hirsutum.
Myosotis = seq.

MENISPERMUM :—

- myosotoides.*
orbiculatum.
virginicum. 1.

MENTHA. 730.

- aquatica. 1.
arvensis. 1.
Auricularia.
canadensis. 1.
canariensis. 1.
cervina. 1.
crispa. 1.
exigua. 3.
frutescens. MS.
gentilis. 1.
hirsuta. 3.
perilloides = Perilla
ocymoides.
piperita. 3.
Pulegium. 3.
rotundifolia. 3.
sativa. 3.
spicata.

— var. *longifolia* =
sylvestris.

— var. *rotundifolia* =
rotundifolia.

— var. *sylvestris* =
sylvestris.

— var. *viridis* =
viridis.

sylvestris. 3.

verticillata.

viridis. 3.

MENTZELIA. 687.

- aspera. 3. (m. Sol.)

MENYANTHES. 203.

- indica. 3.
Nymphoides. 1.
trifoliata. 2.

MERCURIALIS. 1188.

- afra.*
ambigua. 3.
annua. 1.
perennis. 1.
procumbens.
tomentosa. 1.

MESEMBRYANTHEMUM. 649.

- acaule.*
acinaciforme.

MESEMBRYANTHEMUM :—

- acinaciforme*.
 — var. *flavum*.
 — var. *purpureum*.
albidum.
aureum.
barbatum.
bellidiflorum.
bellidæfolium = *præc.* ?
bicolorum.
calamiforme.
copticum. 3.
corniculatum.
crassifolium.
crystallinum.
deltoides.
difforme.
dolabriforme.
edule.
emarginatum.
expansum.
falcatum.
filamentosum.
forficatum.
fulgidum. MS.
geniculiflorum.
glaucum.
glomeratum.
hispidum.
linguiforme.
loreum.
micans.
noctiflorum.
nodiflorum. 2.
pinnatum. MS.
pomeridianum.
pugioniforme.
ringens.
 — var. *caninum*.
 — var. *felinum*.
rostratum.
scabrum.
serratum.
spinosum.
splendens.
stipulaceum.
tenuifolium.
tortuosum.
Tripolium.

MESEMBRYANTHEMUM :—

- tuberosum*.
umbellatum.
uncinatum.
veruculatum.
villosum.

MESPIUS. 646.

- Amelanchier*. 1.
arbutifolia. 1.
canadensis. 1.
Chamaemespilus.
Cotoneaster. 1.
germanica. 1.
Pyracantha. 1.

MESSERSMIDIA. 192.

- Arguzia* = *sibirica*.
sibirica.

MESUA. 879.

- ferrea* (pl.).

MICHELIA. 707.

- Champaca*. 3.
Tsiampacca.

MICROCOS. Cf. GREWIA.

- lateriflora* = *G. asiatica*.
paniculata = *G. Microcos*.

MICROPUS. 1042.

- erectus*. 2.
supinus. 1.

MILIMUM. 83.

- capense*.
ciliare.
cimicinum.
confertum. 3.
effusum. 1.
lendigerum.
paradoxum. 3.
punctatum. 3.

MILLEPORA. 1294.

MILLERIA. 1031.

- biflora*. 3.
quinqueflora. 1.

MILLINGTONIA. 808.

- hortensis*, Linn. f. (pl.).

MIMOSA. 1228.

- arborea*. 3.
asperata. 3. (m. Sol.)
bigemina.
caesia.
casta.

MIMOSA :—

- Ceratonia.*
Cineraria.
cinerea.
circinalis.
cornigera. 3.
Entada.
fagifolia.
Farnesiana.
glauca.
horrida.
Inga.
Intsia. (m. L. f.)
latifolia.
latisiliqua.
Lebbeek. 3.
muricata.
nilotica. 3.
nodosa.
pennata.
peregrina.
pernambucana.
pigra.
plena. 1.
polystachya.
pudica. 3.
punctata. 3.
purpurea.
quadrivalvis.
reticulata.
scandens.
scorpioides=*nilotica.*
semispinosa.
Senegal. (*senegalensis*)
sensitiva.
tamarindifolia.
tenuifolia.
tergemina.
tortuosa. 3.
Unguis-cati. 3. (m. L. f.)
vaga.
virgata. 1.
viva. 3.

MIMULUS. 803.

- luteus.*
ringens. 1.

MIMUSOPS. 492.

- Elengi.* 3.
Kauki.

MINUARTIA. 113.

- campestris.* 1.
dichotoma. 1.
montana. 1.

MIRABILIS. 240.

- dichotoma.* 3.
Jalapa. 1.
longiflora. 3.
odorata=*dichotoma.*

MITCHELLA. 135.

- repens.* 1.

MITELLA. 577.

- diphylla.* 1.
nuda. 1.

MNIUM. 1264.

- androgynum.* (m. Ehrh.)
annotinum.
capillare.
cirrhatum.
crudum.
fissum.
fontanum.
hornum. (m. Ehrh.)
hygrometricum.
Jungermannia.
palustre.
pellucidum.
polytrichoides. (m. L. f.)
purpureum.
pyriforme. (m. Ehrh.)
ramosum.
serpyllifolium.
 — var. *cuspidatum.*
 — var. *punctatum.*
 — var. *proliferum.*
 — var. *undulatum.*
setaceum. 1.
Trichomanis. (m. Ehrh.)
triquetrum. 1.

MOEHRINGIA. 509.

- muscosa.* 1.

MOLLUGO. 112.

- oppositifolia.*
pentaphylla. 3.
Spergula. 3.
stricta. 3.
tetraphylla (= *Polycarpon tetraphyllum*).
verticillata. 3.

- MOLUCCELLA.** 741.
 frutescens. 1.
 laevis. 1.
 persica.
 spinosa. 1.
MOMORDICA. 1150.
 Balsamina. 2.
 Charantia. 2.
 cylindrica. 2.
 Elaterium. 1.
 indica.
 Luffa. 3.
 operculata. 3.
 pedata.
 trifolia=*seq.*
 trifoliata.
MONARDA. 40.
 ciliata.
 Clinopodia. 1.
 clinopodifolia. MS.
 didyma. 1.
 fistulosa. 1.
 mollis=*fistulosa.*
 punctata. 1.
MONNIERIA. —
 trifolia.
MONOTROPA. 551.
 Hypopithys. 1.
 uniflora. 1.
MONSONIA. 936.
 Filia. Suppl.
 speciosa.
MONTIA. 106.
 fontana. 1.
MONTINIA. 1167.
 acris, Linn. f. (pl.).
MORAEA. 62.
 iridioides.
 juncea.
 vegeta. 3.
MORINA. 44.
 persica.
MORINDA. 236.
 citrifolia. 1.
 Royoc. 1.
 umbellata.
MORISONIA. —
 americana.
 flexuosa.
- MORUS.** 1112.
 alba. 1.
 indica.
 nigra. 2.
 papyrifera. 3.
 rubra. 1.
 tatarica. 3.
 tinctoria. 3.
 Zanthoxylon.
MUCOR. 1289.
 cespitosus.
 crustaceus.
 Embolus.
 Erysiphe.
 fulvus.
 furfuraceus.
 glaucus.
 leprosus.
 lichenoides. (m. Ehrh.)
 mephiticus. MS.
 Mucedo.
 septicus.
 sphaerocephalus.
 unctuosus.
 viridescens.
MUELLEA. 911.
 moniliformis, Linn. f.
MUNCHAUSIA. 939.
 speciosa (pl.).
MUNTINGIA. 672.
 Bartramia.
 Calabura. 1.
MURRAEA. 539.
 exotica (pl.).
MUSA. 1207.
 Bihai=*Heliconia Bihai.*
 paradisica. 1.
 sapientum.
 trogodytarum =
 sapientum.
MUSSAENDA. 239.
 formosa.
 frondosa.
 fruticosa.
 spinosa.
MUTISIA. 1004.
 Clematis (pl.).
MYAGRUM. 819.
 aegyptium. 1.

MYAGRUM :—

- hispanicum. 1.
- orientale. 1.
- paniculatum. 1.
- perenne. 1.
- perfoliatum. 1.
- rugosum. 1.
- sativum. 1.
- saxatile. 3.

MYGINDA. —

Uragoga [Jacq.].

MYOSOTIS. 180.

- apula. 1.
- fruticosa.
- Lappula. 1.
- scorpioides. 3.
- var. *arvensis*.
- var. *palustris*.
- virginiana. 1. (virginica).

MYOSURUS. 402.

- minus. 2.

MYRICA. 1169.

- aethiopica.
- asplenifolia* = Liquidambar peregrina.
- cerifera. 1.
- cordifolia. 1.
- Gale. 1.
- quercifolia. 1.
- trifoliata.

MYRIOPHYLLUM. 1123.

- minus.
- spicatum. 1.
- verticillatum. 1.

MYRISMA. 5. [= MYROSMA,

- Linn. f.]
- cannaefolium*, Linn. f.

MYRISTICA. 1204.

- officinalis*, Linn. f.

MYRSINE. 267.

- africana. 1.

MYRTUS. 637.

- androsaemoides*.
- angustifolia. 3.
- biflora. 3.
- brasiliانا. 3.
- caryophyllata. 3.
- Chytraculia. 3.

MYRTUS :—

- communis. 1.
- var. *acutifolia*.
- var. *angustifolia*.
- var. *baetica*.
- var. *belgica*.
- var. *italica*.
- var. *lusitanica*.
- var. *mucronata*.
- var. *romana*.
- var. *tarentina*.
- Cumini. 3.
- dioica. 3.
- Leucadendron*.
- lucida. 3.
- Pimenta*.
- Syzygium. 3.
- zeylanica. 3. (m. Sol.)
- Zuzygium*. (cf. *M. Syzygium*.)

NAJAS. 1156.

- marina. 1.

NAMA. 322.

- jamaicensis. (m. Sol.)
- zeylanica.

NAPAEA. 1203.

- dioica. 1.
- hermaphrodita. 1.
- laevis*.
- scabra*.

NARCISSUS. 412.

- bicolor. 3.
- Bulbocodium. 1.
- calathinus*.
- Jonquilla. 1.
- minor. 3.
- moschatus. 3.
- odorus. 3.
- orientalis*.
- poëticus. 1.
- Pseudo-Narcissus. 1.
- serotinus. 1.
- Tazetta. 1.
- triandrus. 3.
- trilobus. 3.

NARDUS. 73.

- aristata*.
- articulata*.

NARDUS :—

- ciliaris. 1.
- gangitis. 1. (m. L. f.)
- indica.
- stricta. 1.
- thomaea. Suppl.

NAUCLEA. 226.

- orientalis.

NEPENTHES. — (deest).

- destillatoria*.

NEPETA. 726.

- Cataria. 1.
- hirsuta*.
- indica. 1.
- italica. 1.
- malabarica.
- multifida. 2.
- Nepetella. 3.
- nuda. 2.
- pannonica. 1.
- pectinata. 3.
- Scordotis. 3.
- sibirica. 1.
- tuberosa. 1.
- var. erecta, MS.
- ucranica. 1.
- violacea. 1.
- virginica. 3.

NEPHELIUM. 1112 a.

- lappaceum* [Linn. f.].

NERIUM. 300.

- antidysentericum. 1.
- divaricatum*.
- Oleander* (pl.).
- zeylanicum. 3.

NEURADA. 606.

- procumbens* (pl.).

NICOTIANA. 245.

- fruticosa. 3.
- glutinosa. 1.
- militaris*.
- paniculata. 1.
- pusilla*.
- rustica. 1.
- Tabacum. 1.
- urens*.

NIGELLA. 700.

- arvensis. 3.
- damascena. 1.

NIGELLA :—

- hispanica. 2.
- orientalis. 1.
- sativa. 1.

NIGRINA. —

- vesicaria*=seq.
- viscosa*.

NISSOLIA. 884.

- arborea.
- fruticosa*.

NITRARIA. 624.

- Schoberi.

NOLANA. 194.

- prostrata*.

NYCTANTHES. 16.

- angustifolia*.
- Arbor-tristis*.
- hirsuta*. 3.
- Sambac. 3.
- undulata. 1.

NYMPHAEA. 673.

- alba. 1.
- Lotus. 1.
- lutea. 1.
- Nelumbo. 1.

NYSSA. 1232.

- aquatica. 1.

OBOLARIA. —

- virginica*.

OCHNA. —

- Jabotapita*.
- squarrosa*.

OCYUM. 749.

- album. 3.
- americanum. 2.
- Basilicum. 1.
- frutescens*=Perilla
- frutescens*.
- gratissimum. 3.
- menthoides*.
- minimum. 1. (minus.)
- monachorum*.
- polystachyon. (m. L. f.)
- prostratum.
- purpurascens. MS.
- sanctum. 3.
- scutellarioides. 3.

OCYUM :—

- tenuiflorum. 1.
thyrsiflorum. 3.

OEDEIRA. 1047.

- capense [=seq.].
prolifera.

OENANTHE. 359.

- crocata*.
fistulosa. 1.
globulosa. 3.
pimpinelloides. 3.
prolifera. 1.

OENOTHERA. 484.

- biennis. 1.
fruticosa. 1.
hirta.
longiflora.
mollissima. 1.
muricata. 3.
octovalvis.
Onagra=biennis.
parviflora. 3.
perennis.
pumila. 3.
sinuata. 3.

OLAX. —

- zeylanica*.

OLDENLANDIA. 155.

- biflora. 3.
capense. Suppl.
corymbosa. 3.
paniculata. 3.
repens. 3.
stricta.
umbellata. 1.
uniflora. 1.
verticillata.

OLEA. 20.

- americana.
capensis. 1.
europaea. 1.

OLYRA. 1099.

- latifolia. 3.

OMPHALEA. 1102.

- diandra*.
triandra. 3.

ONOCLEA. 1242.

- polypodioides*.
sensibilis. 1.

ONOCLEA :—

- sensitiva*=præc.
trilocularis. MS.

ONONIS. 896.

- alopecuroides. 1.
antiquorum. 3.
arvensis. 3.
capensis.
cenisia.
cernua.
Cherleri. 3.
crispa. 3.
filiformis.
fruticosa. 1.
mauritanica (m. L. f.).
Cf. *Lotus mauritanicus*.
microphylla. Suppl.
minutissima. 1.
mitissima. 1.
natrix. 1.
ornithopodioides. 1.
pinguis. 3.
prostrata. (Cf. *Lotus prostratus*.)

pubescens.

pusilla.

reclinata.

repens. 3.

rotundifolia. 3.

spinosa.

— var. *mitis*

=arvensis.

tridentata.

trifoliata.

umbellata.

variegata. 3.

villosa.

viscosa. 1.

ONOPORDUM. 968.

Acanthium. 3.

acaulon.

arabicum.

illyricum.

ONOSMA. 187.

Echioides. 3.

orientalis.

simplicissima. 3.

OPHIOGLOSSUM. 1243.

OPHIOGLOSSUM :—

- flexuosum*. 3.
- lusitanicum*.
- nudicaule*. Suppl.
- palmatum*.
- pendulum*.
- reticulatum*.
- scandens*. 1.
- vulgatum*. 3.

OPHIORRHIZA. 211.

- Mitreola*.
- Mungos*.

OPHIOXYLON. 1208.

- colubrinum*. MS.
- serpentinum*.

OPHIRA. 499.

- stricta* (pl.).

OPHRYS. 1056.

- alaris*. Suppl.
- alpina*. 1.
- anthropophora*. 1.
- atrata*. 3.
- bivalvata*. Suppl.
- bracteata*. Suppl.
- caffa*.
- camtschatea*. 1.
- catholica*.
- cernua*. 1.
- circumflexa*.
- Corallorhiza*. 1.
- cordata*. 1.
- insectifera*.
- var. *arachnites*.
- var. *myodes*.
- latifolia*.
- lilifolia*. 1.
- Loeselii*. 1.
- monophyllos*. 1.
- Monorchis*. 3.
- Nidus-avis*. 3.
- ovata*. 1.
- paludosa*. 1.
- patens*. Suppl.
- spiralis*. 3.
- volucris*. Suppl.

ORCHIS. 1054.

- abortiva*. 3.
- barbata*. Suppl.
- bicornis*.

ORCHIS :—

- biflora*.
- bifolia*. 3.
- Burmanniana*.
- ciliaris*. 1.
- conopsea*. 1.
- coriophora*. 3.
- cornuta*.
- cubitalis*.
- cucullata*.
- Draconis*. Suppl.
- filicornis*. Suppl.
- flava*. 1.
- flexuosa*.
- fuscescens*.
- globosa*. 3.
- Habenaria*. 3.
- hispidula*. Suppl.
- hyperborea*. 3.
- incarnata*. 3.
- latifolia*. 1.
- maculata*. 1.
- mascula*. 3.
- militaris*. 1.
- Morio*. 1.
- var. *angustifolius*.
- var. *masculus* =
 mascula.
- odoratissima*. 3.
- pallens*.
- papilionacea*. 3.
- psychodes*. 1.
- pyramidalis*. 3.
- sagittalis*. Suppl.
- sambucina*. 3.
- sancta*. 3.
- satyrioides*.
- spathulata*. Suppl.
- spectabilis*. 1.
- strateumatica*.
- Susannae*.
- tenella*. Suppl.
- tipuloides*. Suppl.
- tripetaloides*. Suppl.
- ustulata*. 1.

ORIGANUM. 743.

- aegyptiacum*.
- creticum*. 1.
- Dictamnus*. 1.

ORIGANUM :—

heracleoticum.
 Majorana. 1.
 Maru. 3.
 Onites. 1.
 sipyleum. 1.
smyrnæum.
syriacum.
 vulgare. 1.

ORNITHOGALUM. 428.

arabicum. 3.
bivalve.
 bulbiferum. MS.
 (m. J. f.).
canadense=*Albica*
 major.
capense.
comosum.
hirsutum=*Hypoxis*
 erecta.
 latifolium. 1.
luteum.
minus, *sphalm*=*seq.*
 minimum. 1.
 narbonense. 3.
 nutans. 1.
pyramidale.
 pyrenaicum. 1.
 umbellatum. 3.
 uniflorum. 3.

ORNITHOPUS. 918.

compressus. 1.
 perpusillus. 1.
 scorpioides. 1.
 tetraphyllus. (m. Sol.)

OROBANCHE. 798.

Aeginetia.
 americana. 3.
 capensis. MS.
 cernua. 3.
 laevis. 1.
 major. 1.
 ramosa. 1.
uniflora.
 virginiana. 1.

OROBUS. 904.

angustifolius. 1.
hirsutus.
 Lathyroides. 1.

OROBUS :—

luteus. 1.
 niger. 1.
pyrenaicus.
sylvaticus.
 tuberosus. 1.
 vernus. 3.

ORONTIUM. 448.

aquaticum. 1.

ORTEGA. 53.

dichotoma.
hispanica. 2.

ORVALA. 733 a.

garganica=*Lamium*
Orvala.

ORYZA. 460.

sativa. 1.

OSBECKIA. 482.

chinensis. 1.

OSMITES. 1029.

astericoides.
Bellidiastrum. 3.
calycina. Suppl.
camphorina.
leucantha. MS.

OSMUNDA. 1244.

adiantifolia.
 bipinnata. 1.
 capensis.
cervina.
cinnamomea. 1.
Claytoniana. 1.
crispa.
fliculifolia. 1.
hirsuta.
hirta.
Lunaria.

— var. *Baeckean*a.

Phyllitidis.
regalis. 3.
Spicant. 1.
Struthiopteris. 1.
verticillata.
virginiana. 1.
zeylanica.

OSTEOSPERMUM. 1037.

ciliatum.
 corymbosum.
 ilicifolium. 3.

OSTEOSPERMUM :—

- imbricatum.
- junceum.
- moniliferum.
- pisiferum. 3. ("pisi-
forme.")
- polygaloides.
- spinosum. 3.
- triquetrum. Suppl.
- Uvedalia* = *Polymnia*
Uvedalia.

OSYRIS. 1161.

- alba. 2.

OTHONNA. 1038.

- abrotanifolia. 3.
- arborescens*.
- bulbosa*.
- capillaris. Suppl.
- cheirifolia. 1.
- ciliata. Suppl.
- Cineraria* = *Cineraria*
canadensis.
- coronopifolia. 3.
- crassifolia*. (An cheiri-
folia?)
- dentata* = *ciliata*.
- ericoides. Suppl.
- frutescens. (Cf. *Sene-*
cio rigens).
- geifolia*.
- helenitis* = *Cineraria*
alpina.
- integrifolia* = *Cin. alpina*.
- maritima* = *Cin. mari-*
tima.
- palustris* = *Cin. palus-*
tris.
- parviflora.
- pectinata.
- sibirica = *Cineraria sibi-*
rica.
- sonchifolia*.
- Tagetes*. 3.
- tenuissima.
- trifida. Suppl.
- virginea. Suppl.

OVIEDA. 807.

- mitis. 3.
- spinosa*.

OXALIS. 600.

- Acetosella*. 1.
- Barrelieri*.
- corniculata. 1.
- flava.
- frutescens*.
- hirta.
- incarnata. 3.
- lanata. Suppl.
- longiflora. 1. ("longi-
folia.")
- monophylla.
- natans. Suppl.
- Pes-caprae*.
- punctata. Suppl.
- purpurea.
- sensitiva. 3.
- sessilifolia.
- stricta.
- tomentosa. Suppl.
- versicolor.
- violacea. 1.

PAEDERIA. 294.

- foetida. 3.

PAEDEROTA. 27.

- Ageria*.
- Bonae-Spei*.
- Bonarota*.

PAEONIA. 692.

- anomala.
- officinalis. 3.
- var. *feminea*.
- var. *mascula*.
- tenuifolia. 3.

PANAX. 1237.

- fruticosum. 3.
- quinquefolium. 1.
- trifolium* (pl.).

PANCRACTIUM. 413.

- amboinense*.
- carolinianum*.
- caribaeum*. 1.
- illyricum. 3.
- maritimum.
- mexicanum*.
- zeylanicum. 3.

Panicum. 80.

PANICUM :—

- adhaerens.*
- alopécuroides.* 1.
- Alopecurus.* MS.
- alopécuroideum.*
- americanum* = *Holcus*
- spicatus.*
- arborescens.* 1.
- brevifolium.* 1.
- brizoides.*
- capillare.* 1.
- clandestinum.* 1.
- colonum.* 3.
- coloratum.*
- compositum.*
- conglomeratum.*
- Crus-corvi.* 3.
- Crus-galli.* 1.
- curvatum.*
- cynosuroides.*
- Dactylon.* 1.
- dichotomum.* 1.
- dimidiatum.* 1
- dissectum* = *Paspalum*
- dissectum.*
- distachyon.*
- divaricatum.* 3.
- filiforme.* 1.
- germanicum.*
- glaucum.* 1.
- grossarium.* 3.
- hirtellum.* 3.
- incurvum.* MS.
- indicum.*
- italicum.* 1.
- latifolium.* 1.
- lineare.*
- miliaceum.* 1.
- oryzoides,* Ard.
- patens.* 1.
- polystachyon.* 3.
- ramosum.* 3.
- repens.* 3.
- reptans* = *præc.*
- sanguinale.* 1.
- verticillatum.* 3.
- virgatum.* 1.
- viride.* 3. (m. Sol.)

PAPAVER. 669.

- alpinum.* 3.
- Argemone.* 1.
- cambricum.* 1.
- dubium.* 3.
- hybridum.* 1.
- nudicaule.* 1.
- orientale.* 1.
- Rhoeas.* 3.
- somniferum.* 1.

PARIETARIA. 1220.

- cretica.* 3.
- indica.* 3.
- judaica.* 3.
- lusitanica.* 3.
- microphylla.* 3.
- officinalis.* 3.
- zeylanica.*

PARIS. 515.

- quadrifolia.* 1.

PARKINSONIA. 527.

- aculeata.* 1. (m. Sol.)

PARNASSIA. 392.

- palustris.* 1.

PARTHENIUM. 1115.

- Hysterophorus.* 1.
- integrifolium.* 1.

PASPALUM. 79.

- dimidiatum.*
- dissectum.* 3.
- distichum.* 3.
- paniculatum.* 3.
- scrobiculatum.* 3.
- virgatum.* 3.

PASSERINA. 504.

- capitata.* 3.
- ciliata.*
- dodecandra.*
- ericoides.*
- filiformis.* 1.
- hirsuta.* 3.
- laevigata.* (cf. *Gnidia*
- oppositifolia.*)
- sericea.* (cf. *Gn. sericea.*)
- uniflora.* 3.

PASSIFLORA. 1070.

- caerulea.* 1.
- capsularis.*

PASSIFLORA :—

- cupraea*. 3.
- digitata*.
- divaricata*.
- dubia*.
- foetida*. 1.
- hirsuta*.
- holosericea*. 3. (m. L. f.)
- incarnata*. 1.
- laurifolia*.
- lutea*. 1.
- maliformis*.
- minima*. 3.
- multiflora*.
- Murucuja. 3.
- normalis*. 3. (m. Sol.)
- pallida*. 3.
- pedata*.
- perfoliata*. 3.
- polymorpha*. MS.
- (m. L. f.?)
- punctata*. 3.
- quadrangularis*. 3.
- rotundifolia*. 3.
- rubra*. 3. (m. Sol.)
- serrata*.
- serratifolia*.
- serrato-digitata*.
- suberosa*. 1.
- tiliaefolia*.
- vespertilio*. 1.

PASTINACA. 369.

- costina* = P. Opopanax.
- lucida*. 3.
- Opopanax.
- sativa*.

PATAGONULA. —

- americana*.

PAULLINIA. 512.

- asiatica*. 1.
- barbadensis*.
- caribaea*.
- carthaginensis*.
- curassavica*. 1.
- Cururu*.
- diversifolia*.
- mexicana*. 1.
- nodosa*.
- pinnata*. 3. (m. Sol.)

PAULLINIA :—

- polyphylla*. 3.
- Seriana*.
- tomentosa*.
- triternata*.

PAVETTA. 133.

- indica*. 1.

PECTIS. 1011.

- ciliaris*. 3.
- linifolia*.
- minuta* = Bellium
- minutum*.
- punctata*.

PEDALIMUM. 817.

- Murex. 3.

PEDICULARIS. 763.

- canadensis*.
- comosa*. 1.
- flammea*. 1.
- foliosa*.
- hirsuta*. 1.
- incarnata*. 1.
- lapponica*. 1.
- palustris*. 1.
- recutita*. 3.
- resupinata*. 2.
- rostrata*. 3.
- Sceptrum-Carolinum. 1.
- sylvatica*. 3.
- tristis*. 1.
- tuberosa*. 1.
- verticillata*. 1.

PEGANUM. 621.

- dauricum*.
- Harmala. 1.

PELTARIA. 829.

- alliacea* [Jacq.].

PENAEA. 140.

- fruticulosa*. Suppl.
- fucata*.
- furcata*, sphalm. = praec.
- lateriflora*. Suppl.
- marginata*.
- mucronata*.
- myrtoides*. Suppl.
- Sarcocolla*. 3.
- squamosa*. 3.

PENSTEMON. 313 a.

- chelonoides*.

PENTAPETES. 860.

- acerifolia.*
- phoenicea.* 1.
- suberifolia.*

PENTHORUM. 596.

- sedoides.* 1.

PEPLIS. 458.

- Portula.* 1.
- tetrandra.* 3.

PERDICUM. 1003.

- brasilense.* 3.
- radiale.* 3.
- semiflosculare.* 3.
- (m. L. f.)

PERGULARIA. 306.

- glabra.* 3.
- tomentosa.* 3.

PERILLA. 731.

- frutescens.* MS.
- ocymoides.* 3.

PERIPLOCA. 307.

- africana.* 1.
- graeca.* 1. (*Cf. Ceropegia tenuifolia.*)
- indica.*
- Secamone.*
- tenuifolia* = *Ceropegia tenuifolia.*

PETESIA. 134.

- Lygistum.* 3.
- stipularis.* 3.
- tomentosa.*

PETIVERIA. 472.

- alliacea.* 1.
- octandra.* 3.

PETREA. 781.

- volubilis.* 1.

PEUCEDANUM. 346.

- alpestre.* 3.
- alsaticum.* 3.
- minus* = *Pimpinella pumila.*
- nodosum.*
- officinale.* 1.
- Silau.* 3.

PEZIZA. 1285.

- Acetabulum.*
- Auricula.* (m. Ehrh.)

PEZIZA :—

- cochleata.*
- cornucopioides.*
- cupularis.*
- cyathoides.*
- lentifera.*
- punctata.* (m. Ehrh.)
- scutellata.*

PHACA. 925.

- alpina.* 1.
- australis.* 3. (m. L. f.)
- baetica.*
- frigida.*
- sibirica.* (m. L. f.)
- sulcata.*
- trifoliata.*
- vesicaria.* 3.

PHALARIS. 78.

- aquatica.* 3.
- arundinacea.* 1.
- bulbosa.* 3.
- canariensis.* 1.
- erucaeformis.* 1.
- nodosa.*
- oryzoides.* 1.
- paradoxa.* 3.
- phleoides.* 1.
- tuberosa.*
- utriculata.*
- zizanioides.*

PHALLUS. 1282.

- esculentus.* (m. Ehrh.)
- impudicus.*

PHARNACEUM. 387.

- Cerviana.* 2.
- cordifolium.* 3.
- depressum.*
- distichum.*
- incanum.*
- Mollugo.* 3.
- pennatum.* MS.
- Spergula* = *P. Mollugo*?

PHARUS. 1120.

- latifolius.* 3.

PHASCUM. 1260.

- acaulon.*
- caulescens.* (m. Montin?)
- pedunculatum.* (m. Montin?)

PHASCUM:—

- repens.*
subulatum. 3.

PHASEOLUS. 899.

- alatus.*
Caracalla.
coccineus = *vulgaris* var.
coccineus.
farinosus.
helvolus.
inamoenus.
lathyroides.
lunatus.
Max. 1.
Mungo.
nanus.
radiatus. 1.
semi-erectus. 3.
sphaerospermus.
trilobatus. MS. = *Gly-*
cine triloba.
vexillatus.
vulgaris. 1.
 — var. *coccineus.*

PHELLANDRIUM. 360.

- aquaticum.* 1.
Mutellina. 1.

PHILADELPHUS. 634.

- coronarius.* 1.
inodorus.

PHILLYREA. 19.

- angustifolia.* 1.
chinensis. MS.
latifolia. 3.
media. 3.

PHELEUM. 81.

- alpinum.* 1.
arenarium. 1.
nodosum. 3.
pratense. 1.
schoenoides. 1.

PHLOMIS. 740.

- fruticosa.* 1.
Herba-venti.
indica. 1.
italica.
laciniata.
Leonotis.
Leonurus. 1.

PHLOMIS:—

- lychnitis.* 1.
nepetifolia. 2.
Nissolii.
purpurea. 1.
samia.
tuberosa. 1.
zeylanica.

PHLOX. 217.

- carolina.* 3.
divaricata. 1.
glaberrima. 1.
maculata. 1.
ovata. 1.
paniculata. 3.
pilosa.
setacea.
sibirica. 3.
subulata. 1.

PHOENIX. 1291.

- dactylifera* (pl.).

PHORMIUM [Forst.]. 439.

- orchidioides.*

PHRYMA. 755.

- hians.* MS.
Leptostachya. 1.

PHYLICA. 263.

- bicolor.*
buxifolia. 3.
dioica. 3.
ericoides. 1.
imberbis.
parviflora.
plumosa. 1.
racemosa.
radiata = *Brunia*
radiata.
stipularis.
viscosa.

PHYLLACHNE. 1089.

- uliginosa* [Forst.].

PHYLLANTHUS. 1105.

- bacciformis.*
Emblica.
epiphyllanthus. 1.
 (m. Sol.)
grandifolia.
maderaspatensis.
 (m. L. f.)

PHYLLANTHUS:—

- Niruri. 1.
Urinaria. 1.

PHYLLIS. 330.

- indica*.
Nobla. 1.

PHYSALIS. 247.

- Alkekengi. 1.
angulata. 2.
arborescens.
campechiana.
curassavica.
flexuosa. 1.
minima.
pensylvanica. 3.
peruviana.
pruinosa.
pubescens. 2.
somniafera. 1.
viscosa. 3.

PHYTEUMA. 223.

- comosa. 3.
hemisphaerica. 3.
orbicularis. 1.
pauciflora. 3.
pinnata.
spicata. 3.

PHYTOLACCA. 607.

- americana* = de-
candra.
asiatica.
decandra. 3.
dioica. 3.
icosandra. 3.
octandra. 3.

PICRIS. 948.

- asplenoides*.
Echioides. 1.
Hieracioides. 1.
pyrenaica.

FILULARIA. 1255.

- globulifera. 1.

PIMPINELLA. 373.

- Anisum. 1.
dichotoma.
dioica.
glauc. 1.
magna.
major. MS.
peregrina. 1.

PIMPINELLA:—

- pumila* [Jacq.].
Saxifraga. 3.
—— var. *hircina*.
—— var. *major*.

PINGUICULA. 33.

- alpina*. 1.
lusitanica.
villosa. 1.
vulgaris. 1.

PINUS. 1135.

- Abies*.
balsamea. 3.
canadensis.
Cedrus.
Cembra. 1.
Larix. 2.
orientalis.
Picea.
Pinea. 1.
Strobus. 1.
sylvestris. 1.
Taeda. 1.

PIPER. 47.

- acuminatum*.
aduncum. 3.
Amalago. 3.
Beile.
decumanum.
distachyon.
longum.
maculosum.
Malamiris.
obtusifolium. 1.
nigrum. 1.
pellucidum.
peltatum.
quadrifolium.
reticulatum.
rotundifolium. 3.
Siriboa.
trifolium.
umbellatum.
verticillatum. 3.

PISCIDIA. 889.

- carthaginensis*.
Erythrina.

PISONIA. 1236.

- aculeata. 1.
mitis.

PISTACIA. 1170.

- Lentiscus. 1.
- narbonensis. 3.
- Simaruba* = *Bursera*
gummifera.
- Terebinthus. 3.
- trifolia*.
- vera* (pl.).

PISTIA. 1072.

- Stratiotes. 1.

PISUM. 903.

- arvense*.
- maritimum. 1.
- Ochrus. 1.
- sativum. 1.
- var. *quadratum*.
- var. *umbellatum*.

PLAGIANTHUS [Forst.]. 861.

- divaricatus* [Forst.].

PLANTAGO. 144.

- afra*. 3.
- albicans*. 1.
- alpina*. 3.
- altissima*. 3.
- asiatica*. 1.
- coronopifolia* = seq.
- Coronopus*. 3.
- cretica*. 1.
- Cynops*. 1.
- dubia*.
- indica*. 3.
- Lagopus*. 1.
- lanceolata*.
- Loefflingii*. 1.
- lusitanica*.
- major*. 1.
- maritima*. 1.
- media*. 1.
- Psyllium*. 1.
- recurvata*.
- Serraria*. 3.
- subulata*. 3.
- uniflora* = *Littorella*
uniflora.
- virginica*. 1.

PLATANUS. 1133.

- occidentalis*. 1.
- orientalis*. 1.

PLECTRONIA. 277.

PLECTRONIA :—

- ventosa*. (m. L. f.)

PLINIA. 642.

- crocea*.
- pentapetala*.
- petiolata*.
- pinnata*.
- rubra*.
- tetrapetala*.

PLUKENETIA. —

- volubilis*.

PLUMBAGO. 216.

- europaea*. 1.
- rosea*. 3.
- scandens*.
- zeylanica*. 1.

PLUMERIA. 301.

- alba*.
- obtusa*.
- pudica*.
- rubra*. 3.

POA. 87.

- alpina*. 1.
- amabilis*.
- amboinensis* = seq.
- amboinica*.
- angustifolia*. 1.
- annua*. 1.
- aquatica*. 1.
- bulbosa*. 1.
- capillaris*. 1.
- chinensis*. 1.
- ciliaris*. 3.
- compressa*. 1.
- cristata*.
- distan*s.
- Eragrostis*. 3.
- flava*.
- malabarica*. 1.
- maritima* = *Triticum*
maritimum.
- nemoralis*. 1.
- palustris*. 3.
- pilosa*.
- pratensis*. 1.
- rigida*. 3.
- spicata*.
- tenella*. 1.
- trivialis*. 1.

PODOPHYLLUM. 667.

- diphyllum. 1.
peltatum. 1.

POINCIANA. 529.

- bijuga*.
elata. 3.
pulcherrima. 1.

POLEMONIUM. 220.

- caeruleum. 1.
dubium. 2.
Nyctelea = *Ellisia*
Nyctelea.
reptans. 3.
rubrum.

POLIANTHES. 437.

- tuberosa. 3.

POLYCARPA = seq.

POLYCARPON. 111.

- tetraphyllum. 3.

POLYCNUM. 55.

- arvense. 1.

POLYGALA. 882.

- acutifolia*.
aestuans. Suppl.
alopeuroides.
amara [m. ?]
aspalatha. 3.
bicornis. MS.
bracteolata. 1.
brasiliensis. 3.
Chamaebuxus. 1.
chinensis. 1.
ciliata. 1.
cordifolia. MS.
cruciata.
diversifolia. 3.
glaucoides.
Heisteria. 1.
incarnata. 1.
lutea. 1.
microphylla. 3.
mixta. Suppl.
monspeliaca. 1.
myrtifolia. 1.
oppositifolia.
paniculata. 3. (m. Sol.)
Penaea.
sanguinea. 1.
scabra.

POLYGALA :—

- Senega. 1.
sibirica. 1.
spinosa.
squarrosa. Suppl.
stipulacea. (m. L. f.)
theezans.
trichosperma.
triflora.
umbellata.
verticillata. 1.
viridescens. 1.
vulgaris. 1.

POLYGONUM. 510.

- amphibium. 1.
arifolium. 1.
articulatum. 1.
aviculare. 1.
barbatum. 1.
Bistorta. 1.
chinense. 1.
Convolvulus. 1.
divaricatum. 1.
dumetorum. 3.
erectum.
Fagopyrum. 1.
frutescens. 1.
Hydropiper. 1.
lapathifolium. 3.
lenticulatum.
maritimum. 3.
ocreatum. 1.
orientale. 1.
pensylvanicum. 1.
perfoliatum. 3.
Persicaria. 1.
sagittatum. 1.
scandens. 1.
serratum.
tataricum. 1.
Uvifera = *Coccoloba*
Uvifera.
virginianum. 1.
viviparum. 1.

POLYMNIA. 1083.

- bidentis. MS.
canadensis. 1.
Tetragonotheca. 3.
Uvedalia. 1.

POLYMNIA :—

Wedelia.

POLYPODIUM. 1251.

aculeatum. 1.
alatum.
arborescens.
asperum.
asplenifolium.
 aureum. 1.
 auriculatum. 3.
Barometz.
 bulbiferum. 1.
 cafferum.
 canaliculatum. 1.
 capense. Suppl.
 cicutarium.
comosum.
cordifolium.
crassifolium.
crispatum.
 cristatum. 1.
decussatum.
 dissimile. 3.
Dryopteris.
 exaltatum. 3.
 Filix-femina. 1.
Filix-fragile = fragile.
 Filix-mas. 1.
 fontanum. 1.
 fragile. 2.
 fragrans. 1.
 heterophyllum. 3.
 horridum. 3.
 lanceolatum. (m. L. f.)
leptophyllum (pl.).
 Lonchitis. 1.
loriceum.
lusitanicum.
 lycopodioides. 1.
 marginale. 1.
muricatum.
 noyeboracense. 1.
Orites.
parasiticum.
 pectinatum. 3.
 Phegopteris. 1.
 Phyllitidis. 3.
 phymatodes.
 piloselloides. 3.
 pubescens. 3.

POLYPODIUM :—

pyramidale.
 quercifolium. 3.
 regium. 2.
 reticulatum. 3.
retroflexum.
 rhaeticum. 1.
 scolopendrioides. 3.
 simile. 3.
speluncae.
 spinosum. 3.
squamatum.
Struthionis.
suspensum.
taxifolium.
 Thelypteris.
 tornatile. MS.
 triangulum.
 trifoliatum. 3.
 trifurcatum.
 unitum. 3.
 varium.
 villosum.
 virginianum.
 vulgare.

POLYPREMUM. 139.

procumbens. 1.

POLYTRICHUM. 1263.

alpinum.
 commune. 2.
urnigerum.

POMMEREULLA [Linn. f.]. 74.

Cornucopiae [Linn. f.].

PONTEDERIA. 407.

cernua. MS.
 cordata. 1.
 hastata. 1.
 ovata. 3.
 rotundifolia.
vaginalis.

POPULUS. 1185.

alba. 1.
 balsamifera. 1.
 heterophylla. 1.
 nigra. 1.
 tremula. 1.

PORANA. —

volubilis.

PORELLA. —

pinnata.

POROPHYLLUM = PODO-
PHYLLUM.

PORTLANDIA. 228.

grandiflora (pl.).
hexandra [Jacq.].

PORTULACA. 625.

Anacampseros.
fruticosa.
halimoides.
oleracea. 3.
paniculata.
patens.
pilosa. 3.
Portulacastrum.
quadrifida.
racemosa.
triangularis.

POTAMOGETON. 175.

compressum. 1.
crispum. 1.
densum. 3.
gramineum. 3.
lucens. 1.
marinum. 1.
natans. 1.
pectinatum.
perfoliatum. 1.
pusillum. 1.
serratum. 3.
setaceum.

POTENTILLA. 655.

acaulis = *subacaulis*.
alba. 1.
Anserina. 1.
argentea. 1.
aurea. 3.
bifurca. 1.
canadensis. 1.
caulescens. 3.
fragarioides. 1.
fruticosa. 1.
grandiflora. 1.
heptaphylla = *opaca*.
hirta. 1.
intermedia. 3.
monspeliensis. 1.
multifida. 1.
nitida. 3.
nivea. 1.
norvegica. 1.

POTENTILLA :—

opaca.
pennsylvanica. 3.
pimpinelloides. 1.
recta. 1.
reptans. 1.
rupestris. 1.
sericea. 1.
stipularis. 1.
subacaulis. 3.
supina. 1.
valderia. 3.
verna. 1.

POTERIUM. 1127.

hybridum. 1.
Sanguisorba. 1.
spinosum. 1.

POTHOS. 1082.

acaulis [Jacq.]. 3.
cordata.
crenata.
lanceolata.
latifolia.
palmata.
pinnata.
scandens.

PRASIMUM. 754.

majus. 1.
minus.

PREMNA. 782.

acutifolia, MS. = *integri-*
folia ?
cordifolia, MS. = *integri-*
folia.
integrifolia.
pinnatifolia, MS. = *ser-*
ratifolia ?
serratifolia.

PRENANTHES. 952.

alba. 3.
altissima. ["5"] 1.
altissima ["7"] =
repens.
chondrilloides. 3.
japonica. 3.
muralis. 3.
purpurea. 1.
repens. 2.
tenuifolia.
viminea. 1.

PRIMULA. 198.

- Auricula. 1.
- cortusoides. 1.
- farinosa. 1.
- glutinosa [Wulf.?], MS.
- integrifolia. 1.
- minima.
- veris. 1.
- var. *acaulis*.
- var. *elatior*.
- var. *officinalis*.
- Vitaliana.

PRINOS. 452.

- glaber. 1.
- verticillatus. 1.

PROCKIA. 690.

- crucis. 3.

PROSERPINACA. 107.

- palustris. 1.

PROSOPIS. —

- spicigera*.

PROTEA. 116.

- argentea. 1.
- bruniades. Suppl.
- conifera. 3.
- cucullata.
- cyanooides.
- cunarooides*.
- divaricata.
- fusca*.
- glomerata.
- hirta*.
- Hypophyllocarpodendrum*.
- imbricata. MS.
- Lepidocarpodendron.
- Levisanus. (m. L. f.)
- pallens*.
- parviflora.
- phylicoides. MS.
- pinifolia.
- pubera ("pubigera").
- purpurea. (m. L. f.)
- racemosa.
- repens.
- rosacea.
- saligna* = conifera.
- Serraria.
- speciosa*.
- sphærocephala.

PROTEA :—

- spicata*.
- strobilina*.
- totta*.

PRUNELLA. 752.

- hyssopifolia. 1.
- laciniata. 3.
- lusitanica* = Cleonia
- lusitanica.
- vulgaris. 1.
- var. *grandiflora*.
- var. *laciniata*.

PRUNUS. 640.

- Armeniaca. 1.
- avium. 1.
- var. *Bigarella*.
- var. *Duracina*.
- canadensis. 3.
- Cerasus*.
- var. *aetiana*.
- var. *austera*.
- var. *avium* = P.
- avium.
- var. *Bigarella*.
- var. *Caproniana*.
- var. *dulcis*.
- var. *Duracina*.
- var. *Juliana*.
- var. *plena*.
- var. *pumila*.
- var. *rosea*.
- domestica*.
- var. *acinaria*.
- var. *amygdalina*.
- var. *Augustana*.
- var. *Brignola*.
- var. *cerea*.
- var. *cereola*.
- var. *damascena*.
- var. *galatensis*.
- var. *hungarica*.
- var. *Juliana*.
- var. *maliformis*.
- var. *Myrobalana*.
- var. *Pernigona*.
- var. *praeco*.
- insititia*.
- Laurocerasus. 1.
- lusitanica. 1.

PRUNUS:—

- Mahaleb. 1.
- Padus. 1.
- pensylvanica. Suppl.
- pumila. 3.
- sibirica. 1.
- spinosa.
- virginiana. 1.

PSIDIUM. 635.

- Cujavus.
- Guajava* = præc.
- pomiferum. 3.
- pyriferum. 3.

PSORALEA. 928.

- aculeata. 2.
- americana. 3.
- aphylla.
- bituminosa. 1.
- bracteata.
- capitata. Suppl.
- corylifolia. 1.
- cytisoides* = Indigofera
- cytisoides.
- Dalea. 1.
- enneaphylla* = Indigo-
- fera enneaphylla.
- glandulosa. 3.
- hirta. 3.
- palaestina.
- pentaphylla*.
- pinnata. 1.
- prostrata*.
- repens.
- spicata.
- tenuifolia. 2.
- tetragonoloba. 3.

PSYCHOTRIA. 231.

- asiatica. 3.
- herbacea. 3.
- serpens.

PTELEA. 153.

- trifoliata. 1.
- viscosa* = Dodonæa
- viscosa.

PTERIS. 1246.

- aquilina.
- arborea.
- atropurpurea. 1.
- biaurita. 3.

PTERIS:—

- caudata. 1.
- cretica. 3.
- dichotoma*.
- furcata*.
- grandifolia. 3.
- heterophylla. 3.
- lanceolata*.
- lineata*.
- longifolia. 3.
- mutilata*.
- pedata. 1.
- piloselloides*.
- quadrifoliata*.
- rufa*.
- semipinnata. 1.
- stipularis. 3.
- trichomanoides. 3.
- tricuspidata*.
- vittata. 1.

PTEROCARPUS. 887.

- Draco*.
- Ecastaphyllum.
- lunatus.
- ovalis*.

PTERONIA. 980.

- camphorata. 3.
- pallens. Suppl.
- oppositifolia. 3.
- spinosa. Suppl.

PULMONARIA. 184.

- angustifolia. 1.
- hirta* = Hyoscyamus
- physalodes.
- maritima. 1.
- officinalis. 1.
- sibirica. 1.
- suffruticosa.
- virginica. 1.

PUNICA. 638.

- Granatum. 1.
- nana*.

PYROLA. 568.

- maculata. 1.
- minor. 1.
- rotundifolia. 1.
- secunda. 1.
- umbellata. 1.
- uniflora. 1.

PYRUS. 647.

- baccata. 3.
- communis. 1.
- var. *falerna*.
- var. *favonia*.
- var. *pompejana*.
- var. *Pyraster*.
- var. *Volema*.
- coronaria. 1.
- Cydonia. 1.
- Malus. 1.
- var. *Cavillea*.
- var. *Cestiana*.
- var. *epirotica*.
- var. *paradisiaca*.
- var. *Prasomila*.
- var. *rubelliana*.
- var. *sylvestris*.
- Pollveria.

QUASSIA. 545.

- amara. 3.
- Simarouba. Suppl.

QUERCUS. 1128.

- Aegilops. 3.
- alba. 1.
- Cerris. 3.
- coccifera. 3.
- dubia*.
- Esculus. 1.
- gramuntia. 1.
- Ilex. 1.
- molucca*.
- nigra. 1.
- Phellos. 1.
- Prinus. 3.
- Robur. 1.
- rubra. 1.
- Smilax* = *Q. Ilex*.
- Suber. 1.

QUERIA. 114.

- canadensi. 1.
- hispanica. 3.

QUISQUALIS. 553

- indica. 3.

RAJANIA. 1183.

- cordata*.

RAJANIA :—

- hastata*. 1.
- quinquefolia*.

RANDIA. 214.

- aculeata*. 3.
- mitis*.

RANUNCULUS. 715.

- abortivus*. 1.
- aconitifolius*. 1.
- acris*. 1.
- alpestris*. 3.
- amplexicaulis*. 1.
- aquatilis*. 3.
- arvensis*. 1.
- asiaticus*. 1.
- auricomus*. 1.
- bulbosus*. 1.
- bullatus*.
- cassubicus*. 1.
- chaerophyllos*. 3.
- creticus*. 1.
- falcatus*. 1.
- Ficaria*. 1.
- Flammula*. 1.
- glacialis*. 1.
- gramineus*. 3.
- grandiflorus*.
- hederaceus*. 3.
- illyricus*. 1.
- lanuginosus*. 3.
- lapponicus*. 1.
- Lingua*. 1.
- monspeliacus*.
- muricatus*. 3.
- nivalis*. 1.
- nodiflorus*. 1.
- orientalis*. 3.
- palustris*, MS. [*cf. Sm.*
in Rees, Cycl.].
- parnassifolius*. 3.
- parviflorus*. 3.
- parvulus*.
- platanifolius*. 3.
- polyanthemus*. 1.
- pyrenaicus*.
- repens*. 1.
- reptans*. 1.
- rutaefolius*. 3.
- sceleratus*. 1.

RANUNCULUS:—

Thora. 1.

RAPHANUS. 846.

caudatus. 3.

erucoides. Suppl.

Raphanistrum. 1.

sativus. 1.

sibiricus. 1.

RAUVOLFIA. 293.

canescens. 3.

nitida. 3.

subpubescens = *canescens*.*tetraphylla* = *nitida*.*tomentosa* [Jacq.].

REAUMURIA. 701.

vermiculata. 3.

RENEALMIA. 2.

disticha.*monostachya* = *Tillandsia monostachya*.*paniculata* = *Till. paniculata*.*polystachya* = *Till. polystachya*.*recurvata* = *Till. recurvata*.*usneoides* = *Till. usneoides*.

RESEDA. 629.

alba. 1.

canescens. 1.

fruticulosa. 3.

glauca. 1.

lutea. 1.

Luteola. 1.

mediterranea.

odorata.

Phyteuma. 3.

purpurascens. 1.

Sesamoides. 1.

suffruticulosa.

undata. 3.

RESTIO. 1164.

dichotomus.

Elegia = *Elegia juncea*.

paniculatus.

simplex.

triflorus.

RESTIO:—

vimineus.

RETZIA [Thunb.]. (m. L. patr.)

209.

capensis.

RHACOMA. 146.

Crossopetalum. 3.

RHAMNUS. 262.

Alaternus. 1.

alpinus. 1.

catharticus. 1.

circumscissus. Suppl.

colubrinus. 3.

cubensis. 3.

cumanensis.

Frangula.

— var. *laevifolius*.

iguaneus. 3.

infectorius.

Jujuba. 1.

lineatus.

Lotus. 1.

lycioides. 3.

micranthus. 3.

Napeca. 1.

Oenoplia. 1.

oleoides. 3.

Paliurus. 1.

pentaphyllus.

pumilus.

Sarcomphalus. 3.

saxatilis. 3.

siculus.

Spina-Christi. 1.

theezans.

volubilis. Suppl.

Zizyphus. 1.

RHEEDIA. —

lateriflora.

RHEUM. 520.

compactum. 3.

palmatum. 3.

Rhabarbarum. 1.

Rhaponticum. 1.

Ribes.*undulatum*.

RHEXIA. 483.

Acisanthera. 3. (m. Sol.)

RHEXIA :—

- glutinosa*. Suppl.
- mariana*.
- virginica*. 1.

RHINANTHUS. 758.

- capensis*. 3.
- Crista-galli*. 1.
- Elephas*. 3.
- indica*.
- orientalis*.
- Trixago*. 3.
- virginica*. (m. L. f.)

RHIZOPHORA. 611.

- Candel*.
- caseolaris*.
- conjugata*. 1.
- corniculata*.
- cylindrica*.
- gymnorhiza*.
- Mangle*. 3.

RHODIOLA. 1186.

- rosea*. 1.

RHODODENDRON. 562.

- Chamaecistus*. 1.
- dauricum*. 1.
- ferrugineum*. 1.
- hirsutum* (pl.).
- maximum*. 1.
- ponticum*.

RHODORA. —

- canadensis*.

RHUS. 378.

- angustifolia*. 1.
- Cobbe*.
- Cominia*. 3.
- Copallium*. 1.
- Coriaria*. 1.
- Cotinus*. 1.
- glabra*. 1.
- javanica*. 1.
- laevigata*. 3.
- lucida*. 1.
- Metopium*. 3.
- radicans*. 1.
- succedanea*.
- tomentosa*. 1.
- Toxicodendrum*. 1.
- typhina*. 3.
- vernix*. 1.

RIBES. 278.

- alpinum*. 1.
- Cynosbati*. 1.
- Grossularia*.
- nigrum*. 1.
- oxyacanthoides*.
- reclinatum*. 1.
- rubrum*. 1.
- sibiricum*. MS.
- Uva-crispa*.

RICCIA. 1271.

- crystallina*.
- fluitans*.
- glauca*.
- minima*.
- natans*.

RICHARDIA. 451.

- scabra*. 1.

RICINUS. 1142.

- communis*. 3.
- Mappa*.
- Tanarius*.

RICOTIA. 833.

- aegyptiaca*.

RIVINA. 163.

- canescens*, MS. = *humilis*
- var.
- humilis*.
- var. *canescens*.
- var. *glabra* = *laevis*.
- var. *scandens* =
- octandra*.

- laevis*. 3.

- octandra*. 3.

- paniculata*. Cf. *Salva-*
- dora persica*.

ROBINIA. 913.

- Acacia*.
- Caragana*. 1.
- frutescens*. 3.
- frutex* = *prae*.
- grandiflora* = *Aeschyno-*
- mene grandiflora*.
- hispida*. 3.
- mitis*. 3.
- Pseud-acacia*. 1.
- pygmaea*. 1.
- spinosa*.
- violacea* [Jacq.].

ROELLA. 222.

ciliata. 1.

reticulata.

RONDELETIA. —

americana.

asiatica.

obovata.

odorata [Jacq.].

repens.

trifoliata [Jacq. "trifolia"].

RORIDULA. 284.

dentata (pl.).

ROSA. 652.

alba. 1.

alpina. 3.

arvensis [Huds.].

canina. 3.

carolina. 3.

centifolia. 1.

cinnamomea. 1.

Eglantheria. 1.

gallica. 3.

— var. *versicolor*.

indica. 3.

pendulina. 3.

pimpinellifolia. 3.

prolifera. MS.

rubiginosa.

sempervirens. 3.

sinica.

spinosissima.

villosa. 3.

ROSMARINUS. 41.

officinalis. 1.

ROTALA. 52.

verticillaris.

ROTTBOELLIA. 101.

corymbosa [L. f.].

dimidiata [L. f.] = Panicum dimidiatum.

exaltata [L. f.].

incurvata [L. f.] = Aegilops incurvata.

ROUSSEA, MS. —

capensis, MS. = Russelia

capensis, Suppl.

ROYENA. 570.

glabra. 1.

ROYENA:—

hirsuta. 1.

lucida. 1.

villosa. 3.

RUBIA. 131.

angustifolia.

cordifolia.

lucida.

peregrina. 1.

tinctorum. 1.

RUBUS. 653.

arcticus. 1.

caesius. 1.

canadensis. 1.

Chamaemorus. 1.

Dalibarda. 3.

fruticosus. 1.

hispidus. 1.

idaeus. 1.

jamaicensis. 3.

japonicus.

moluccanus. 1.

occidentalis. 1.

odoratus. 1.

parvifolius. 1.

saxatilis. 1.

RUDBECKIA. 1025.

angustifolia. 3.

hirta. 1.

laciniata. 1.

oppositifolia.

purpurea. 1.

triloba. 1.

RUELLIA. 804.

antipoda. 1.

biflora. 3. (m. Sol.)

Blechum. 3.

clandestina. 1.

ciliaris.

crispa. 1.

paniculata. 3.

repanda. 3.

repens. 3.

ringens. 1.

strepens. 1.

tentaculata. 3.

tuberosa. 1.

RUMEX. 464.

Acetosa.

RUMEX:—

- Acetosella. 1.
 aculeatus. 3.
 acutus. 1.
 aegyptiacus.
aegyptius = *praec.*
 alpinus. 1.
 aquaticus. 3.
 Britannica.
 bucephalophorus. 1.
 capensis. MS.
 crispus. 1.
 dentatus.
 digynus. 1.
divaricatus = *pulcher.*
 Lunaria. 1.
 luxurians.
 maritimus. 1.
multifidus. *Of. R. Aceto-*
 sella, etc.
 obtusifolius. 3.
 Patientia.
 persicarioides. 1.
 pulcher. 1.
 roseus. 1.
 sanguineus. 1.
 scutatus. 1.
 spinosus. 1.
 tingitanus. 3.
 tuberosus. 3.
 verticillatus. 3.
 vesicarius. 1.

RUMPHIA. —

amboinensis.

RUPPIA. 176.

- maritima. 1.
 spiralis. MS.

RUSCUS. 1205.

- aculeatus. 1.
androgynus. 1. (pl.)
 Hypoglossum. 1.
 Hypophyllum. 1.
 racemosus. 3.

RUSSEA, MS. = ROUSSEA,
i. e. Russelia, Suppl. non
 al.

RUTA. 537.

- chalepensis. 3.
 graveolens. 1.

RUTA:—

- graveolens var. *montana*
 = *montana.*
 linifolia. 3.
 montana [Mill.]
patavina.
tenuifolia [Gouan?].

SACCHARUM. 77.

- officinarum. 1.
 Ravennae.
 spicatum. 1.
 spontaneum.

SAGINA. 177.

- apetala.*
 erecta. 1.
 procumbens. 1.
 virginica. 1.

SAGITTARIA. 1124.

- lancifolia. 3.
 obtusifolia. 1.
 pugioniformis.
 sagittifolia. 1.
trifolia.

SALACIA. 1066.

chinensis (pl.).

SALICORNIA. 10.

- arabica. 2.
 caspica. 1.
europaea.

— var. *fruticosa* =
fruticosa.

— var. *herbacea* =
herbacea.

foliata. MS.

fruticosa. 3.

herbacea. 3.

— var. *virginica.*

strobilacea [Pall. ?].

virginica.

SALIX. 1158.

- aegyptiaca. 2.
 alba.
amygdalina.
 arbuscula. 1.
 arenaria. 1.
aurita.
 babylonica. 1.
 caprea. 1.

SALIX:—

cinerea.
depressa.
fragilis. 3.
fusca.
glauc. 1.
hastata. 1.
Helix.
hermaphroditica. 1.
herbacea. 1.
incubacea.
lanata. 1.
lapponum. 1.
Myrsinites. 1.
myrtilloides. 1.
pentandra. 1.
phylicifolia. 1.
purpurea. 3.
repens. 1.
reticulata. 1.
retusa. 3.
rosmarinifolia. 1.
triandra. 1.
viminalis. 1.
vitellina. 3.

SALSOLA. 315.

altissima. 3.
aphylloides. MS. =
aphylla. Suppl.
arborescens. Suppl.
baccata.
fruticosa. 3.
hirsuta. 3.
hyssopifolia [Pall.].
Kali. 1.
muricata. 3.
oppositifolia. MS.
polyclonos. 3.
prostrata. 1.
rosacea. 1.
salsa. 3.
satira. 3.
Soda. 3.
Souda = *praec.*
Tragus. 3.
vermiculata. 1.

SALVADORA. 164.

persica. 1.

SALVIA. 42.

SALVIA:—

acetabulosa. 3.
egyptiaca [No. 1]. 3.
egyptiaca [No. 36] =
spinosa.
Aethiopis. 1.
africana. 3.
 — var. *caerulea.*
 — var. *lutea.*
agrestis.
argentea. 3.
aurea. 3.
canariensis. 1.
ceratophylla. 1.
ceratophylloides.
clandestina. 3.
colorata. 3.
cretica.
disermas. 3.
dominica. 1.
Forskohlei. 3.
glutinosa. 1.
graveolens. MS.
haematodes.
hispanica. 1.
Horminum. 1.
indica. 3.
lyrata. 1.
mexicana. 1.
napifolia [Jacq.].
nemorosa. 3.
nutans. 1.
officinalis. 1.
paniculata. 3.
parviflora. MS.
pinnata. 3.
pomifera. 3.
pratensis. 1.
pyrenaica.
Sclarea. 3.
serotina. 3.
spinosa.
sylvestris. 2.
syriaca. 3.
urticifolia. 1.
Verbenaca. 1.
verticillata.
virginica. MS.
viridis. 1.

- SAMARA. 137.
laeta (pl.).
- SAMBUCUS. 381.
 canadensis. 2.
 Ebulus. 2.
 nigra. 2.
 — var. *laciniata*.
 racemosa. 1.
- SAMOLUS. 225.
 Valerandi. 1.
 — var. *africanus*.
- SAMYDA. 558.
Guidonia.
 nitida. 3.
 parviflora. 3.
pubescens.
serrulata.
spinosa.
- SANGUINARIA. 666.
 canadensis. 1.
- SANGUISORBA. 148.
 canadensis. 1.
media.
 officinalis. 1.
- SANICULA. 333.
 canadensis. 1.
 europaea. 1.
marilandica.
- SANTALUM. 161.
 album. 3.
- SANTOLINA. 985.
 alpina. 3.
 Amellus, *cf.* *Calea Amellus*.
annua = *Athanasia annua*.
 anthemoides. 3.
 Chamaecyparissus. 1.
crenata = *Athanasia crenata*.
crithmifolia = *Ath. crithmifolia*.
dentata = *Ath. dentata*.
 jamaicensis, *cf.* *Calea jamaicensis*.
 oppositifolia, *cf.* *Calea oppositifolia*.
pubescens = *Ath. pubescens*.
- SANTOLINA :--
rosmarinifolia. 3.
squarrosa = *Athanasia squarrosa*.
trifurcata = *Ath. trifurcata*.
- SAPINDUS. 514.
chinensis.
 Saponaria. 1.
spinosus.
trifoliatus.
- SAPONARIA. 580.
 cretica. 3.
 illyrica. 3.
 hybrida. MS.
lutea.
 ocymoides. 1.
 officinalis. 1.
 — var. *hybrida* =
 hybrida.
 orientalis. 1.
 porrecta. MS. = seq. ?
 porrigens.
Struthium = *Gypsophila Struthium*.
 Vaccaria. 1.
- SARACA. 880.
indica (pl.).
- SARCOPHYTE [Sparrm. ?].
 1112 b.
sanguinea (pl.).
- SAROTHTA. 391.
 gentianoides. 1.
- SARRACENIA. 672 a. (plagulae desunt).
flava.
purpurea.
- SATUREJA. 723.
 capitata. 1.
græca.
 hortensis. 1.
 Juliana. 1.
Mastichina = *Thymus Mastichina*.
 montana. 1.
origanoides = *Cunila mariana*.
spinosa.
 Thymbra. 1.
 viminea. 3. (m. Sol.)

SATUREJA:—

virginiana = *Thymus*
virginiana.

SATYRIUM. 1055.

albidum. 1.
capense.
Epipogium.
hians. Suppl.
hircinum. 3.
nigrum. 1.
orobanchioides.
Suppl.
pedicellatum. Suppl.
plantagineum. 3.
repens. 3.
viride. 3.

SAURURUS. 478.

cernuus. 1.
natans.

SAUVAGESIA. 283.

erecta. 3.

SAXIFRAGA. 575.

adscendens. 3.
ajugifolia. 3.
aizoides. 1.
androsacea. 1.
aspera. 1.
autumnalis.
bronchialis.
bryoides. 3.
bulbifera.
Burseriana. 3.
caesia. 3.
caespitosa. 1.
cernua. 1.
Cotyledon. 1.
crassifolia. 1.
cuneifolia.
Cymbalaria.
geranioides.
Geum. 1.
granulata. 1.
groenlandica.
hederacea.
Hirculus.
hirsuta. Cf. *rotundifolia*,
No. 12.
hypnoides. 1.
mutata. 3.

SAXIFRAGA:—

nivalis. 1.
oppositifolia. 1.
pennsylvanica. 2.
petraea. 3.
punctata. 1.
rivularis. 3.
rotundifolia, No. 12;
cf. *hirsuta*.
rotundifolia, No. 19.
sedoides. 1.
serpens, MS.
sibirica. 3.
stellaris. 1.
tridactylites. 1.
— var. *alpina*.
— var. *tectorum*.
umbrosa.

SCABIOSA. 120.

africana. 1.
alpina. 1.
amplexicaulis.
argentea. 3.
arvensis. 1.
atropurpurea. 3.
attenuata. Suppl.
Columbaria. 3.
cretica. 1.
graminifolia. 3.
gramuntia. 3.
indurata.
integrifolia. 1.
isetensis. 3.
leucantha.
— var. *spuria*.
marina, lapsu = seq.
maritima. 3.
ochroleuca. 3.
palaestina. 3.
papposa. 3.
prolifera. 3.
pterocephala.
pumila.
rigida. 3.
scabra. MS.
sicula.
stellata. 1.
Succisa. 1.
sylvatica. 3.
k *

SCABIOSA :—

- syriaca. 1.
- tatarica. 1.
- transylvanica. 1.
- triandra, sphalm. =
gramuntia.
- ucranica.

SCABRITA. 124.

- scabra (pl.).
- triflora.

SCAEVOLEA. 229.

- Lobelia = seq.
- Plumieri.

SCANDIX. 364.

- Anthriscus. 1.
- australis.
- Cerfolium. 1.
- grandiflora.
- infesta.
- nodosa. 1.
- Odorata. 1.
- Pecten-Veneris. 1.
- procumbens.
- trichosperma.

SCHEUCHZERIA. 465.

- palustris. 1.

SCHINUS. 1193.

- Areira. 3.
- Fagara = Fagara
- Pterota.
- Limonia = Limonia
- acidissima.
- Molle. 1.
- myricoides = Schrebera
- schinoides.
- tragodes = Fagara
- tragodes.

SCHMIDELIA. 506.

- racemosa (pl.).

SCHOENUS. 68

- aculeatus. 1.
- albus. 1.
- bulbosus.
- capensis. 3.
- coloratus. 3.
- compar.
- compressus.
- deustus. MS.
- ferrugineus. 1.

SCHOENUS :—

- fuscus. 3.
- glomeratus. 1.
- lithospermus = Carex
- lithosperma.
- Mariscus. 1.
- mucronatus. 1.
- nigricans. 1.
- niveus.
- radiatus. Suppl.
- secans = Carex litho-
- sperma.
- spathaceus = Cyperus
- spathaceus.
- thermalis.
- ustulotus.

SCHREBERA. 324.

- schinoides (pl.?).

SCHWALBEA. —

- americana.

SCHWENKIA. 31.

- americana (pl.).

SCILLA. 429.

- amoena. 1.
- autumnalis. 3.
- bifolia. 3.
- hyacinthoides. 3.
- italica. 1.
- Lilio-Hyacinthus.
- lusitanica. 3.
- maritima.
- peruviana. 3.
- tetraphylla. Suppl.
- unifolia.

SCIRPUS. 71.

- acicularis. 1.
- antarcticus.
- articulatus. 3.
- australis.
- autumnalis.
- caespitosus. 1.
- capillaris. 1.
- capitatus.
- cephalotes.
- ciliaris.
- corymbosus. 3.
- cyperoides.
- dichotomus.
- echinatus. 1.

SCIRPUS:—

- ferrugineus. 3. (m. Sol.).
fluitans.
 geniculatus. (m. Sol.).
glomeratus = Schoenus
 glomeratus.
 Halleri. MS.
 Holoschoenus. 1.
 hottentottus.
 intricatus.
 lacustris. 1.
lithospermus = Carex
 lithosperma.
 Luzulae. 3.
 maritimus. 1.
Michelianus.
 miliaceus. 3.
 mucronatus. 1.
 mutatus. 3.
 palustris. 1.
 retrofractus. 1.
 romanus. 3.
 setaceus. 1.
 spadiceus. 1.
 squarrosus.
 supinus. 3.
 sylvaticus. 1.
 trigynus.
triqueter.

SCLERANTHUS. 578.

- annuus. 3.
 perennis. 3.
 polycarpus.

SCOLYMUS. 963.

- hispanicus. 1.
 maculatus. 1.

SCOPARIA. 145.

- arborea. Suppl.
 dulcis. 3.
procumbens.

SCORPIURUS. 920.

- muricata. 1.
 sulcata. 1.
 vermiculata. 1.
 subvillosa.

SCORZONERA. 947.

- angustifolia. 1.
 graminifolia. 1.
hirsuta.

SCORZONERA:—

- hispanica. 1.
 humilis. 3.
 laciniata. 1.
 orientalis. 3.
 picroides. 1.
 purpurea. 1.
 resedifolia. 3.
 tingitana. 1.
 tomentosa.

SCROPHULARIA. 773.

- aquatica. 1.
 auriculata. 1.
 betonicifolia.
 canina. 1.
 chinensis.
coccinea.
 frutescens.
 lucida. 3.
 marilandica. 2.
 meridionalis. Suppl.
 nodosa. 2.
 orientalis. 1.
 peregrina. 1.
 sambucifolia. 1.
 Scorodonia. 3.
 trifoliata. 3.
 vernalis. 1.

SCURRULA. —

- parasitica* = Loranthus
 Scurrula.

SCUTELLARIA. 751.

- albida.
 alpina. 1.
altissima.
 cretica. 3.
 galericulata. 1.
 hastifolia. 1. ("has-
 tata.")
havanensis [Jacq.]
 hyssopifolia. 1.
 indica. 1.
 integrifolia. 1.
 lateriflora. 1.
 lupulina. 3.
 minor. 3.
 orientalis. 1.
 peregrina. 1.
supina = lupulina.
 k* 2

SECALE. 102.

- cereale. 1.
- creticum. 3.
- orientale.
- villosum.

SECURIDACA. 883.

- erecta [Jacq.].
- scandens [Jacq.].
- volubilis. 1.

SEDUM. 595.

- acre.
- Aizoon. 1.
- album.
- Anacampseros.
- annuum. 3.
- atratum. 3.
- caeruleum.
- Cepaea. 2.
- dasyphyllum.
- globiferum.
- hispanicum.
- hybridum.
- libanoticum.
- mixtum.
- reflexum. 3.
- rubens = Crassula
rubens.
- rupestre. 3.
- sexangulare. 3.
- stellatum. 1.
- Telephium.
- var. album.
- var. maximum.
- var. purpureum.
- verticillatum.
- villosum.

SEQUIERIA. —
americana.

SELAGO. 786.

- capitata.
- coccinea.
- corymbosa. 1.
- dubia = Eranthemum
angustatum.
- ericoides = Stilbe eri-
coides.
- fasciculata.
- fruticosa. 3.
- lychnidea.

SELAGO:—

- Pinastra = Stilbe Pi-
nastra.
- polystachya.
- Prunastri = Stilbe Pi-
nastra.
- rapunculoides. 3.
- spuria. 3.
- tomentosa. 3. Cf.
Manulea tomentosa.

SELINUM. 344.

- Carvifolia. 3.
- Cervaria = Athamantha
Cervaria.
- Monnieri. 3.
- palustre.
- pyrenaeum [Gouan?].
- Seguierii [Jacq.].
- silvestre. 1.

SEMECARPUS. 377.

- Anacardium [Linn. f.].

SEMPERVIVUM. 632.

- arachnoideum.
- arborescens.
- canariense.
- globiferum = seq.
- globuliferum. 1.
- hirtum.
- montanum.
- sediforme.
- tectorum.

SENECIO. 996.

- abrotanifolius. 3.
- aegyptius. 1.
- alpinus. Suppl.
- arabicus. 3.
- aureus. 1.
- byzantinus. 1.
- canadensis. 1.
- cordifolius. Suppl.
- divaricatus. 1.
- Doria. 3.
- Doronicum. 3.
- elegans. 1.
- erucifolius. 1.
- foetidus.
- glastifolius. Suppl.
- glaucus. 1.
- halimifolius. 1.

SENECIO :—

- hastatus*. 3.
hastulatus = præc.
hieracifolius. 1.
ilicifolius. 1.
incanus.
Jacobaea. 1.
 — var. *discoidea*.
lanatus.
linifolius. 3.
lividus. 1.
longifolius.
nebrodensis. 3.
nemorensis. 1.
paludosus. 1.
persicifolius.
peucedanifolius. Suppl.
polifolius.
populifolius. 3.
Pseudo-china.
pubigerus.
purpureus. 3. (m.
 Sol.)
rigens. 3.
rigidus. 3.
sarracenicus. 1.
squalidus. 1.
sylvaticus. 1.
triflorus. 1.
trilobus. 2.
umbellatus.
varicosus. 3.
virgatus. 3.
viscosus. 1.
vulgaris. 1.

SEPTAS. 480.

capensis 3.

SERAPIAS. 1057.

- capensis*.
cordigera. 3.
grandiflora. 3. (m.
 L. f.)
Helleborine. 1.
 — var. *latifolia*.
 — var. *longifolia*.
 — var. *palustris*.
latifolia = S. Helle-
 borine, var.
Lingua. 1.

SERAPIAS :—

- longifolia* = S. Helle-
 borine, var.
rubra.

SERIOLA. 958.

- aethnensis*.
cretensis.
laevigata.
urens.

SERIPHIMUM. 1049.

- ambiguum*.
cinereum. 1.
corymbiferum = Stoebe
gnaphaloides.
fuscum. 3.
gnaphaloides = fuscum.
plumosum.

SERPICULA. 1106.

- serpens* (pl.).

SERRATULA. 965.

- alpina*. 1.
 — var. *angustifolia*.
 — var. *cynoglossifolia*.
 — var. *lapatifolia*.
amara. 1.
arvensis. 1.
babylonica = Centaurea
babylonica.
centauroides. 1.
coronata. 3.
Chamaepeuce.
glauca.
multiflora. 1.
novelboracensis.
praealta. 1.
salicifolia. 1.
scariosa. 1.
spicata. 1.
squarrosa. 1.
tinctoria. 1.
 — var. *praealta* =
praealta.

SERTULARIA. 1298.

SESAMUM. 802.

- indicum*. 1.
orientale. 1.

SESELI. 367.

- Ammoides*. 3.
annuum. 3.

SESELI:—

- Carvifolia*.
 elatum. 3.
 glaucum. 3.
 Hippomarathrum. 3.
 montanum. 3.
 parvulum. MS.
 pimpinelloides. 2.
pumilum = Pimpinella
 pumila.
pyrenaeum = Selinum
 pyrenaeum.
saxifragum.
 tortuosum. 2.
 Turbith. 3.

SESUVIUM. 645.

- Portulacastrum* (pl.).

SHERARDIA. 126.

- arvensis. 1.
 fruticosa. 1.
 muralis. 1.

SIBBALDIA. 401.

- erecta. 3.
 procumbens. 1.

SIBTHORPIA. 793.

- africana*.
europaea. 1.
peregrina.

SICYOS. 1154.

- angulata. 1.
 Garcini. (m. L. f.)
laciniata.
trifoliata.

SIDA. 866.

- Abutilon. 1.
 alba. 3.
 alnifolia. 3.
 americana. 3.
amplissima.
 asiatica. 3.
capitata = Malachra
 capitata.
 ciliaris. 3.
 cordifolia. 1.
 crispa. 1.
 cristata. 1.
 indica. 3.
 inflata. MS.
 jamaicensis. 3.

SIDA:—

- occidentalis*.
 paniculata. 3. (m.
 Sol.)
 periplocifolia. 1.
radiata.
retusa.
 rhombifolia. 1.
 spinosa. 1.
 triquetra. 3.
 umbellata. 3. (m.
 Sol.)
 urens. 3.
 viscosa. 3. (m. Sol.)

SIDERITIS. 729.

- canariensis. 1.
 cretica. 1.
 hirsuta. 1.
 hyssopifolia. 1.
 incana. 3.
 lanata. 3.
 montana. 1.
Ocymastrum = Stachys
 hirta.
 perfoliata. 3.
 romana. 1.
 scordioides. 3.
 syriaca. 1.

SIDEROXYLON. 261.

- decandrum,
foetidissimum [Jacq.].
 inerme. 1.
 lycioides. 3.
 melanophleos. 3.
 mite.
Pacurero [Loefl.].
 spinosum. 1.
 tenax. 3.

SIGESBECKIA. 1018.

- occidentalis*. 1.
orientalis. 1.

SILENE. 583.

- acaulis. 3.
 alpestris [Jacq.].
 amoena. 1.
 anglica. 3.
 antirrhina. 1.
 Armeria. 1.
 Behen. 3.

SILENE:—

- bupleurioides. 1.
- cerastoides. 1.
- conica.
- conoidea. 1.
- crassifolia.
- cretica. 1.
- fruticosa. 1.
- gallica. 1.
- gigantea. 1.
- inaperta. 1.
- lusitanica. 1.
- Muscipula*.
- mutabilis. 3.
- noctiflora. 1.
- nocturna. 1.
- nutans. 1.
- paradoxa. 3.
- pendula. 1.
- polyphylla*.
- porrigens* = *Saponaria*
porrigens.
- portensis* = *inaperta*.
- quadrifida. 3.
- quinquevulnera. 1.
- rigidula* = *cerastoides*.
- rubella. 3.
- rupestris. 1.
- Saxifraga. 1.
- stricta. 3.
- vallesia. 3.
- virginica. 1.
- viridiflora. 3.

SILPHIUM. 1032.

- Asteriscus. 3.
- connatum*.
- helianthoides*.
- laciniatum. 1.
- perfoliatum. 3.
- solidaginoides. 1.
- trifoliatum. 1.
- trilobatum. 3.

SINAPIS. 845.

- alba. 1.
- arvensis. 1.
- brassicata* = *juncea*.
- chinensis. 3.
- erucoides. 3.
- hispanica. 3.

SINAPIS:—

- incana. 3.
- juncea. 1.
- laevigata. 3.
- nigra*.
- orientalis. 3.
- pubescens. 3.
- pyrenaica. 3.
- violacea. MS.

SIPHONANTHUS. —

indica.

SIRIUM. 138.

myrtifolium (Pl.).

SISON. 356.

- Ammi. 1.
- Ammoides* = *Seseli*
Ammoides.
- Amomum. 1.
- canadense. 1.
- inundatum. 1.
- segetum*.
- verticillatum.

SISYMBRIUM. 836.

- altissimum. 1.
- amphibium. 3.
- var. *aquaticum*.
- var. *palustre*.
- var. *terrestre*.
- arenosum. 1.
- asperum. (an m. L. f.?)
- Barbareae. 3.
- Barrelieri. 3.
- bursifolium. 3.
- catholicum.
- indicum. 3.
- integrifolium. 1.
- Irio. 1.
- Loeselii. 3.
- monense. 2.
- murale. 1.
- Nasturtium-aquaticum.
1.
- orientale. 3.
- Parra.
- polyceratium. 3.
- Sophia. 1.
- strictissimum. 1.
- supinum. 1.
- sylvestre. 1.

SISYMBRIUM:—

- tanacetifolium. 3.
tenuifolium.
 valentinum. 3.
 vimineum. 1.

SISYRINCHIUM. 1064.

- Bermudiana. 2.
 palmifolium. 3.

SIUM. 355.

- angustifolium. 3.
 Falcaria. 2.
groecum.
 latifolium. 1.
 Ninsi.
 nodiflorum. 1.
 rigidius. 1.
siculum.
 Sisarum. 1.

SLOANEA. —

- dentata*.
emarginata.

SMILAX. 1182.

- annua. MS.
 aspera. 1.
Bona-nox.
 caduca. 1.
 China. 1.
 excelsa. 1.
 herbacea. 1.
lanceolata.
 laurifolia. 1.
 Pseudo-China. 1.
 rotundifolia. 1.
 Sarsaparilla. 1.
 tannoides. 1.
zeylanica.

SMYRNIUM. 370.

- aegyptiacum. 3.
 aureum. 1.
 integerrimum. 1.
 Olusatrum. 1.
 perfoliatum. 1.

SOLANDRA. 332 a.

- capensis. 3.
 septemdentata. MS.
 tridentata. MS.

SOLANUM. 248.

- aethiopicum. 3.
 bahamense. 1.

SOLANUM:—

- bonariense. 1.
 campechiense. 3.
 capense.
 carolinense. 1.
 diphyllum. 1.
 Dulcamara. 1.
ferox.
fuscatum.
guineense = *Atropa*
 guineense.
havanense [Jacq.].
 igneum. 3.
incanum = *sanctum*.
 indicum. 1.
 insanum. 3.
 lycioides.
 Lycopersicum. 1.
 macrocarpon.
 mammosum. 1.
 Melongena. 1.
montanum.
 nigrum. 1.
 — var. *guineense*.
 — var. *judaicum*.
 — var. *patulum*.
 — var. *villosum*.
 — var. *virginicum*.
 — var. *vulgare*.
 — var. *vulgatum*
 = *praec*.
novum.
obscurum.
paniculatum.
 peruvianum. 1.
 pimpinellifolium. 2.
 Pseudocapsicum. 1.
pulverulentum = *tomen-*
 tosum.
 quercifolium. 1.
racemosum.
 radicans. 3.
rubrum.
 sanctum. 1.
 scandens.
 sodomaeum. 1.
subinerme [Jacq.].
 tomentosum. 2.
 trilobatum. 1.

SOLANUM :—

- tuberosum. 1.
- verbascifolium. 1.
- virginianum.
- virginicum* = *præc.*

SOLDANELLA. 200.

- alpina. 3.

SOLIDAGO. 998.

- alpina* = *Cineraria*
- alpina*.
- altissima. 1.
- bicolor. 3.
- caesia*.
- canadensis. 1.
- discolor, MS. [an bi-color?]
- Doronicum*.
- flexicaulis. 2.
- lanceolata. 3.
- lateriflora. 1.
- latifolia*.
- linifolia* = *Senecio lini-folius*.
- mexicana. 1.
- minuta. 3.
- montana* = *Cacalia sarracenica*.
- noveboracensis. 1.
- rigida. 1.
- sempervirens.
- serotina. MS.
- Virgaurea*. 1.

SONCHUS. 949.

- alpinus. 3.
- arvensis. 1.
- canadensis. 1.
- floridanus. 1.
- maritimus. 3.
- oleraceus. 3.
- var. *asper*.
- var. *lavis*.
- palustris. 1.
- Plumieri. 3.
- sibiricus. 1.
- tataricus.
- tenerrimus. 3.
- tuberosus.

SOPHIA. —

- Carolina*.

SOPHORA. 522.

- alba.
- alopecuroides*.
- australis. 3.
- biflora. 3.
- capensis. 3.
- genistoides. 1.
- heptaphylla*.
- japonica. 3.
- lupinoides. 1.
- occidentalis. 3.
- tinctoria. 1.
- tomentosa. 1.

SORBUS. 644.

- ambigua. MS.
- Aucuparia. 1.
- domestica.
- hybrida. 3.
- sativa. MS.

SPARGANIUM. 1095.

- erectum. 1.
- natans. 1.

SPARRMANIA, MS. —

- capensis = *Melanthium monopetalum*.

SPARRMANNIA [Linn.f.]. 677.

- africana* [Linn.f.].

SPARTIUM. 891.

- angulatum*.
- capense. 3.
- complicatum. 1.
- contaminatum.
- junceum. 1.
- monospermum. 1.
- patens* = *Cytisus patens*.
- purgans* = *Genista purgans*.
- radiatum. 2.
- scoparium. 1.
- Scorpius*.
- sepiarium.
- sphaerocarpum*.
- spinosum. 1.

SPATHELIA. —

- simplex*.

SPERGULA. 604.

- arvensis. 1.
- laricina. 1. (“larici-folia.”)

SPERGULA :—

- nodosa. 1.
- pentandra. 1.
- saginoides. 2.

SPERMACOCE. 125.

- articularis. Suppl.
- capitellata. MS.
- corymbosa* = procumbens.
- hirta.
- hispida. 1.
- procumbens. 3.
- spinosa. 3.
- stricta. Suppl.
- strigosa.
- suffruticosa* [Loefl.].
- tenuior. 1. (m. Sol.)
- verticillata.

SPHAERANTHUS. 1044.

- africanus. 3. ("afer.")
- chiuensis. 3.
- indicus. 3.

SPHAERIA [Weigel]. 1288.

- anastomosans, byssea,
- gregaria, laevigata,
- lichenoides, Mori,
- mucosa, pertusa,
- rugosa, tremelloides,
- variolosa.

(11 species ad eandem plagulam glutinatae.)

SPHAGNUM. 1258.

- alpinum*.
- arborescens*.
- palustre. 3.

SPIGELIA. 210.

- Anthelmia. 3.
- marilandica*.

SPILANTHES [Jacq.]. 974.

- Acmella.
- atriplicifolius.
- insipida* [Jacq.].
- oleracea.
- Pseudo-Acmella* = S. Acmella.
- urens* [Jacq.].

SPINACIA. 1174.

- fera. 3.

SPINACIA :—

- oleracea. 1.

SPINIFEX. 1216.

- squarrosus.

SPIRÆA. 651.

- argentea. Suppl.
- Aruncus. 3.
- chamaedrifolia. 1.
- crenata. 1.
- Filipendula. 1.
- hypericifolia. 1.
- laevigata*.
- opulifolia. 3.
- palmata.
- salicifolia. 1.
- sorbifolia. 1.
- tomentosa. 1.
- trifoliata. 1.
- triloba*.
- trilobata* = praec.
- Ulmaria. 1.

SPLACHNUM. 1262.

- ampullaceum. 1.
- luteum. 1.
- rubrum. 1.
- subglobosum. MS.
- vasculosum*.

SPONDIAS. 593.

- lutea*.
- Mombin* = purpurea.
- Myrobalanus* = lutea.
- purpurea*.

SPONGIA. 1295.

STACHYS. 736.

- aethiopica. 3.
- alpina. 1.
- annua. 3.
- arvensis. 3.
- bituminosa, MS. = glutinosa.
- cretica. 1.
- germanica. 1.
- glutinosa. 2.
- hirta. 3.
- italica. [an Mill. ?]
- maritima. 3. ("marina.")
- orientalis*.
- palaestina. 3.
- palustris. 1.

STACHYS :—

- recta. 3.
- rigida, MS.=glutinosa.
- rugosa. MS.
- spinosa*.
- sylvatica. 1.
- villosa. MS.

STAEHELINA. 981.

- arborescens. 3.
- centauroides* = *Athanasia*
- dentata.
- Chamaepeuce*.
- corymbosa. MS.
- dubia. 2.
- fruticosa. 3.
- gnaphaloides. 1.
- imbricata*. [an *Bery*.?]

STAPELIA. 311.

- hirsuta. 1.
- mammillaris*.
- variegata. 3.

STAPHYLEA. 382.

- pinnata. 1.
- trifolia ("ternata"). 3.

STATICE. 395.

- Armeria*. 1.
- aurea. 1.
- cordata.
- crispa. MS.
- echioides.
- Echinus*. 3.
- ferulacea. 3.
- flexuosa. 1.
- fruticulosa. MS.
- incana. 3.
- Limonium*. 1.
- lobata. Suppl.
- minuta*.
- monopetala. 1.
- pruinosa.
- purpurata. 3.
- reticulata. 1.
- sinuata. 1.
- speciosa. 1.
- suffruticosa. 1.
- tatarica. 1.
- virginica. MS.

STELLARIA. 584.

- Arenaria*. 2.

STELLARIA :—

- biflora* = *Arenaria*
- striata.
- cerastoides. 1.
- dichotoma. 1.
- graminea. 1.
- Holostea. 1.
- nemorum. 1.
- radians. 1.

STELLERA. 503.

- Chamaejasme*.
- Passerina. 1.

STEMODIA. 797.

- maritima. 3.

STERCULIA. 1143.

- Balanghas. 3.
- foetida*.

STERIS. 318.

- javana* (pl.).

STEWARTIA. 876.

- Malacodendron. 1.

STILAGO. 1067.

- Bunius* (pl.).

STILBE. 1234.

- cernua. Suppl.
- ericoides.
- Pinastra.

STILLINGIA. 1147.

- sylvatica* (pl.).

STIPA. 94.

- arguens. 3.
- Aristella*.
- avenacea.
- capillata. 3.
- junceae. 1.
- membranacea. 2.
- pennata. 1.
- spicata. Suppl.
- Spinifex* = *Spinifex*
- squarrosus.
- tenacissima. 2.

STOEBE. 1048.

- aethiopica. 1.
- ericoides.
- gnaphaloides.
- prostrata.
- scabra. Suppl.

STRATIOTES. 703.

- alismoides.

STRATIOTES :—

Aloides. 1.

STRUMPFIA. —

maritima.

STRUTHIOLA. 162.

erecta. 3.*virgata.* 3.

STRYCHNOS. 250.

*colubrina.**Nux-vomica.*

STYRAX. 569.

latifolia, MS. = *Halesia*
*diptera.**officinale.* 1.STUARTIA, *vide* STEWARTIA.

SUBULARIA. 822.

aquatica. 3.

SURIANA. 598.

maritima. 2.

SWERTIA. 327.

corniculata. 1.*dichotoma.* 1.*difformis.* 3.*perennis.* 3.*rotata.* 1.

SWIETENIA. 542.

Mahagoni (pl.).

SYMPHONIA. 853.

globulifera (pl.).

SYMPHYTUM. 185.

officinale. 1.*orientale.**tuberosum.* 1.

SYMPLOCOS. —

martinicensis.

SYRINGA. 22.

persica. 1.*vulgaris.* 1.

TABERNAEMONTANA. 304.

alternifolia = *citrifolia*.*Amsonia.**citrifolia.* 3.*cymosa.**Echites.**grandiflora.**laurifolia.* 3.

TAGETES. 1009.

TAGETES :—

erecta. 1.*minuta.**patula.* 1.

TAMARINDUS. 49.

indica. 1.

TAMARIX. 383.

gallica. 1.*germanica.* 1.

TAMUS. 1181.

communis. 1.*cretica.*

TANACETUM. 987.

annuum. 1.*Balsamita.* 1.*chamomilloides.* MS.*cotuloides.**crithmifolium* = *Athanasia crithmifolia*.*frutescens* ("fruticosum") = *Hippia frutescens*.*incanum.**monanthos.* 3.*sibiricum.* 1.*suffruticosum.**vulgare.* 1.— var. *crispum*.

TARCHONANTHUS. 983.

camphoratus. 1.*ericoides.* Suppl.

TARGIONIA. 1268.

hypophylla. 1.*perversa.* MS.

TAXUS. 1199.

baccata. 3.*nucifera.*

TELEPHIUM. 385.

Imperati. 1.*oppositifolium.*

TERMINALIA. 1222.

Catappa. 3.

TERNSTROEMIA. 662.

meridionalis (pl.).

TETRACERA. 697.

volubilis. 1.

TETRAGONIA. 648.

fruticosa. 1.*herbacea.*

TETRAGONOTHECA. —

helianthoides = Polymnia

Tetragonotheca.

TEUCRIUM. 722.

alpinum = T. Pseudo-
chamaepitys.

Arduini. 3.

asiaticum. 3.

Botrys. 1.

campanulatum. 3.

canadense. 1.

capitatum. 1.

Chamaedrys. 1.

Chamaepitys. 1.

creticum. 1.

cubense [Jacq.].

flavum. 1.

fruticans. 1.

hircanicum. 3.

Iva. 1.

latifolium.*Laemannii*.

lucidum. 3.

Marum. 1.

massiliense. 3.

mauritanum.

montanum. 1.

mucronatum = spinosum.*multiflorum*.

Nissolianum. 3.

orientale.

Polium. 1.

Pseudochamaepitys. 3.

Pseudopithys = praec.

pumilum. 3.

pyrenaicum. 1.

salicifolium. 3.

Scordium. 1.

Scorodonia. 1.

sibiricum. 1.

spinosum. 1.

supinum. 3.

virginicum.

THALIA. —

geniculata.

THALICTRUM. 713.

alpinum. 1.

angustifolium. 1.

aquilegifolium. 1.

THALICTRUM :—

contortum. 1.

Cornuti.

dioicum. 1.

flavum. 1.

— var. speciosum.

foetidum.*hybridum* = contortum.*lucidum*.

minus. 1.

petalodeum.

purpurascens. 1.

sibiricum.

simplex. 3.

tuberosum. 1.

THAPSIA. 368.

Asclepium.*foetida*.*garganica*.

trifoliata. 1.

villosa. 3.

THEA. 685.

Bohea. 3.

Hyson. MS.

sinensis = T. Bohea.

viridis.

THELIGONUM. 1126.

Cynocrambe. 2.

THEOBROMA. 934.

angusta.

Cacao.

Guazuma. 1. (m. Sol.)

THEOPHRASTA. —

americana.

THESIUM. 292.

alpinum. 3.

amplexicaule.

capensis. MS.

capitatum.

euphorbioides. (m. L. f.)

Frisia.

funale. 3.

linophyllum. 1.

paniculatum. 3.

scabrum. 3.

spicatum. (m. L. f.)

strictum. (m. L. f.)

umbellatum. 1.

THLASPI. 825.

THLASPI:—

- alliaceum*.
- alpestre. 3.
- arvense. 1.
- Bursa-pastoris. 1.
- campestre. 1.
- hirtum. 1.
- montanum.
- peregrinum. 2.
- perfoliatum. 1.
- saxatile. 1.

THEYALLIS. —

- brasiliensis*.

THUYA (THUJA, THYA). 1136.

- aphylla. 3.
- cupressoides*.
- occidentalis. 1.
- orientalis. 1.

THUNBERGIA. 815.

- capensis* [Retz.].

THYMBRA. 724.

- spicata. 1.
- verticillata. 1.

THYMELAEA. —

- squarrosa*.

THYMUS. 744.

- Acinos. 1.
- alpinus. 1.
- cephalotes*.
- Mastichina.
- Piperella. 3.
- pulegioides* = *Cunila*
- thymoides*.
- Serpyllum. 3.
- Tragoriganum* = *Satureia*
- Thymbra.

- villosus*.
- virginicus*.
- vulgaris. 1.
- Zygis. 1.

TIARELLA. 576.

- cordifolia. 2.
- trifoliata.

TILIA. 679.

- americana*.
- europaea. 2.

TILLAEA. 178.

- aquatica. 1.
- capensis. Suppl.

TILLAEA:—

- muscosa*. 3.
- rubra* = *Crassula rubens*.

TILLANDSIA. 403.

- lingulata.
- monostachya. 3.
- paniculata*.
- polystachya*.
- recurvata. 3.
- serrata*.
- tenuifolia*.
- usneoides. 3.
- utriculata.

TINUS. —

- occidentalis*.

TOLUIFERA. —

- Balsanum*.

TOMEX. —

- tomentosa* = *Callicarpa*
- tomentosa*.

TORDYLIUM. 337.

- Anthriscus*. 1.
- apulum*.
- latifolium* = *Caucalis*
- latifolia*.
- maximum. 3.
- nodosum. 1.
- officinale. 1.
- peregrinum. 3.
- syriacum. 1.

TORENIA. 770.

- asiatica* (pl.).

TORMENTILLA. 656.

- erecta. 1.
- reptans. 3.

TOURNEFORTIA. 193.

- cymosa*. 3.
- foetidissima*.
- glabra. 1.
- hirsutissima*.
- humilis* = *Heliotropium*
- fruticosum*.
- serrata*.
- sibirica* = *Messersmidia*
- sibirica*.
- suffruticosa*.
- volubilis. 2.

TOZZIA. 762.

- alpina. 1.

- TRACHELIUM. 224.
 caeruleum. 1.
 diffusum, Suppl. (an
 Linn. f.?)
- TRADESCANTIA. 406.
 axillaris.
 cristata. 3.
 geniculata [Jacq.].
 malabarica.
 nervosa.
 papilionacea.
 virginiana=seq.
 virginica. 1.
- TRAGIA. 1103.
 Chamaelea. (m. L. f.)
 involucrata. (m. L. f.)
 Mercurialis. 1. (m. Sol.)
 scandens=volubilis.
 urens. (m. L. f., 1778.)
 volubilis. 1.
- TRAGOPOGON. 946.
 asperum.
 crocifolium. 3.
 Dalechampii. 1.
 Dandelion. 3.
 hybridum = Geropogon
 glabrum.
 lanatum. 3.
 orientale. 1.
 pieroides. 1.
 porrifolium. 1.
 pratense. 1.
 villosum. 3.
 virginicum. 1.
- TRAPA. 158.
 natans (pl.).
- TREMELLA. 1276.
 adnata.
 Auricula.
 difformis.
 hemisphaerica.
 juniperina.
 lichensoides.
 Nostoc. (m. L. f.)
 purpurea. (m. L. f.)
 verrucosa.
- TREWIA. —
 nudiflora.
- TRIANTHEMA. 572.

- TRIANTHEMA :—
 decandra. 3.
 monogyna. 3.
 pentandra. 3.
Pentandrium = *Trian-*
thema.
 gyna.
- TRIBULUS. 547.
 cistoides. 3.
 lanuginosus. 3.
 maximus. 3.
 terrestris. 1.
- TRICHILIA. 541.
 glabra. 3.
 Guara = Guarea trichi-
 lioides.
 hirta.
 trifolia.
 trifoliata = praec.
- TRICHOMANES. 1253.
 adiantoides.
 capillaceum.
 canariense = Polypodium
 leptophyllum?
 chinense.
 crispum. 1.
 hirsutum.
 membranaceum. 1.
 polypodioides.
 pyxidiferum.
 scandens. 3.
 tunbridgense. 3.
- TRICHOSANTHES. 1149.
 amara.
 Anguina. 3.
 cucumerina.
 nervifolia.
 palmata.
 punctata (pl.).
- TRICHOSTEMA. 750.
 brachiatum.
 dichotomum. 1.
- TRIDAX. —
 procumbens.
- TRIENTALIS. 474.
 capensis.
 europaea. 1.
- TRIFOLIUM. 930.
 agrarium. 1.
 alexandrinum. 3.

TRIFOLIUM :—

- alpestre. 3.
 alpinum. 1.
 angustifolium. 1.
 arvense. 1.
 biflorum. 1.
 caeruleum. MS.
 Cherleri. 2.
 clandestinum. MS.
 clypeatum. 1.
 comosum.
 creticum. MS.
 filiforme. 1.
 fragiferum. 1.
fruticans.
 globosum. 2.
 glomeratum. 1.
 hybridum. 1.
 incarnatum. 1.
 indicum. MS.
 italicum. MS.
 lappaceum. 1.
 Lupinaster. 1.
 medium.
 Melilotus [var.] caerulea :
 cf. caeruleum.
 — var. *corniculata*.
 — var. *cretica*; *cf.*
 creticum.
 — var. *indica*; *cf.* in-
 dicum.
 — var. *italica*; *cf.* ital-
 icum.
 — var. *officinalis*; *cf.*
 officinale.
 — var. *ornithopo-*
 dioides; *cf.* *ornitho-*
 podiioides.
 — var. *polonica*; *cf.*
 polonicum.
 messanense.
 montanum [no. 29, Sp.
 Pl. I. p. 770].
 montanum [no. 37, l. c.
 p. 772] = spadiceum.
 ochroleucum.
 officinale. MS.
 ornithopodioides. MS.
 pannonicum.

TRIFOLIUM :—

- polonicum. MS.
 pratense. 1.
 procumbens. 1.
reflexum.
 repens. 1.
 resupinatum. 1.
retusum = strictum.
 rubens. 1.
 scabrum. 1.
 spadiceum. 1.
 spumosum. 1.
 squarrosum. 1.
 stellatum. 1.
 striatum. 1.
 strictum. 2.
 subterraneum. 1.
suffocatum.
 tomentosum. 1.
 uniflorum. 1.

TRIGLOCHIN. 466.

- bulbosum. (m. L. f.)
 maritimum. 1.
 palustre.

TRIGONELLA. 932.

- corniculata. 3.
Foenum-graecum.
 — var. *sylvestris*.
 hamosa. 3.
indica (pl. ?).
 laciniata. 3.
 monspeliaca. 2.
 platycarpus. 1.
 polycerata. 1.
 ruthenica. 1.
 spinosa. 1.
 striata. Suppl.

TRILIX. —

- lutea*.

TRILLIUM. 469.

- cernuum. 1.
 erectum. 3.
 sessile. 1.

TRIOPTERIS. 500.

- jamaicensis*.

TRIOSTEUM. —

- angustifolium*
perfoliatum.

TRIPLARIS. 103.

- TRIPLARIS :—**
 americana. 3.
TRIPSACUM. 1097.
 dactyloides. 3.
 hermaphroditum. 3.
 (m. Sol.)
TRITICUM. 104.
 aestivum.
 caninum = *Elymus*
 caninus.
 compositum.
 hibernum.
 juncum. 3.
 maritimum. 3.
 monococcum. 1.
 polonicum. 3.
 repens. 3.
 Spelta.
 tenellum. 3.
 turgidum. 3.
 unilaterale.
TRIUMFETTA. 620.
 annua.
 Bartramia.
 Lappula. 1.
 semitriloba.
TROLIUS. 716.
 asiaticus. 1.
 europaeus. 1.
TROPÆOLUM. 481.
 hybridum. 3.
 majus. 1.
 minus. 1.
 peregrinum. 3.
TROPHIS. 1165.
 americana. 3.
TUBULARIA. 1297.
 Androsace.
 divaricata (Alga?).
 fragilis.
TULBAGHIA. 411.
 capensis.
TULIPA. 425.
 Breyniana.
 Gesneriana. 1.
 sylvestris. 1.
TURNERA. 384.
 cistoides. 3.
 Pumilea. 3. (m. Sol.)
- TURNERA :—**
 sidoides ("sidiformis").
 3.
 ulmifolia. 1.
TURRAEA. 549.
 virens (pl.).
TURRITIS. 843.
 alpina. 3.
 glabra. 1.
 hirsuta. 1.
TUSSILAGO. 995.
 alba. 1.
 alpina. (m. L. f.)
 Anaudria. 1.
 dentata.
 Farfara. 1.
 frigida. 1.
 hybrida. 1.
 japonica. 3.
 nutans. 3.
 Petasites. 1.
TYPHA. 1094.
 angustifolia. 3.
 latifolia.
ULEX. 915.
 capensis.
 europaeus. 1.
ULMUS. 321.
 americana. 1.
 campestris. 1.
 pumila. 1.
ULVA. 1275.
 compressa.
 confervoides.
 granulata.
 intestinalis.
 labyrinthiformis.
 Lactuca. 1. (m. L. f.)
 lanceolata.
 latissima.
 Linza.
 lumbricalis.
 papillosa.
 pavonia = *Fucus pavo-*
 nus.
 pruniformis.
 rugosa.

ULVA :—

umbilicalis.

UNIOLEA. 89.

bipinnata. 3.*mucronata.**paniculata.* 3.*spicata.* 1.

UNONA, Suppl. 709.

discreta (pl.). Suppl.

UNXIA, Suppl. 1010.

camphorata. Suppl.

URENA. 873.

*americana.**lobata.* 1.*procumbens.* 1.*sinuata.* 1. (m. Sol.)*Typhalaea.*

URTICA. 1111.

aestuans. 3.*africana.* MS.*alienata.**baccifera.**balearica.* 3.*canadensis.* 1.*cannabina.* 1.*capitata.* 1.*ciliaris.**cylindrica.* 1.*dioica.* 1.*divaricata.* 1.*Dodartii.* 3.*grandifolia.* 3.*interrupta.* 3.*nivea.* 1.*Parietaria.**pilulifera.* 1.*pumila.* 1.*urens.* 1.

UTRICULARIA. 34.

*alpina.**bifida.**caerulea.* (m. L. f.)*foliosa.**gibba.* 1.*minor.* 1.*subulata.* 1.*vulgaris.* 1.

UVARIA. —

japonica.

UVARIA :—

zeylanica.

UVULARIA. 422.

*amplexifolia.**perfoliata.* 1.*sessilifolia.*

VACCINIUM. 497.

album. 1.*Arctostaphylos.* 3.*corymbosum.* 1.*frondosum.* 1.*hispidulum.* 1.*ligustrinum.* 1.*mucronatum.* 1.*Myrtillus.* 1.*Oxycoccus.* 1.*stamineum.* 1.*uliginosum.* 1.*Vitis-idæa.* 1.

VAHLIA [Thunb.] 329.

VALANTIA. 1219.

Aparine. 1.*articulata.* 1.*Cruciata.* 1.*Cucullaria.* 3.*glabra.* 3.*hispida.* 3.*hypocarpa.* 3.*muralis.* 1.

VALERIANA. 48.

Calcitrapa. 1.*celtica.* 3.*chinensis.* 1.*Cornucopie.* 1.*dioica.* 1.*echinata.* 3.*elongata.* 3.*Locusta*, var. *coronata.*— var. *dentata.*— var. *discoidea.*— var. *mutica.*— var. *olitoria.*— var. *pumila.*— var. *radiata.*— var. *vesicaria.**mixta.**montana.* 3.

VALERIANA :—

- officinalis*. 1.
- Phu.* 1.
- pyrenaica*. 1.
- rubra*. 1.
- saxatilis*.
- scandens* [Loefl.].
- sibirica*. 1.
- supina*. 3.
- tripteris*. 3.
- tuberosa*.

VALLEA. 678.

- stipularis* (pl.).

VALLISNERIA. 1157.

- spiralis* (pl.).

VANDELLIA. 795.

- diffusa* (pl.).

VARRONIA. 255.

- alba*.
- bullata*.
- curassavica* = *praec.*
- globosa*.
- lineata*. 3.
- martinicensis*.

VATERIA. —

- indica*.

VATICA. 614.

- chinensis* (pl.).

VELEZIA. 326.

- rigida*. 1.

VELLA. 820.

- annua*. 1.
- Pseudocytisus*. 1.

VERATRUM. 1210.

- album*. 1.
- luteum*. 1.
- nigrum*. 1.

VERBASCUM. 242.

- Arcturus* = *Celsia* *Arcturus*.
- Blattaria*. 1.
- Boerhavi*. 3.
- glaucum* = *phoeniceum*.
- hybridum*. MS.
- Lychnitis*. 1.
- Myconi*. 1.
- nigrum*. 1.
- Osbeckii*.
- phlomidoides*.

VERBASCUM :—

- phoeniceum*. 1.
- sinuatum*. 3.
- spinosum*.
- Thapsi* = *seq.*
- thapsoides*.
- Thapsus*. 1.

VERBENA. 35.

- bonariensis*. 1.
- carolina*. 3.
- curassavica*.
- hastata*. 1.
- jamaicensis*. 1. (m. Sol.)
- indica*. 3.
- lappulacea*. 3. (m. Sol.)
- mexicana*. 1.
- nodiflora*. 1. (m. Sol.)
- officinalis*. 1.
- orubica*.
- prismatica*. 1. (m. Sol.)
- spuria*.
- staechadifolia*. 3. (m. Sol.)
- supina*. 1.
- tetrandra*.
- urticifolia*. 1.

VERBESINA. 1021.

- Acmella* = *Spilanthes*
- Acmella*.
- alata*. 1.
- alba* = *Eclipta erecta*.
- asteroides* = *Amellus*
- Lychnitis*.
- biflora*. 3.
- Bosvallea*. Suppl.
- calendulacea*. 1.
- chinensis*. 1.
- fruticosa*. (m. L. f.)
- Lavenia*.
- linifolia* = *Pectis liniifolia*.
- mutica* = *Anthemis americana*.
- nodiflora*. 2.
- prostrata* = *Eclipta prostrata*.
- Pseudo-Acmella* = *Spilanthes Pseudo-Acmella*.
- virginica*.

VERONICA. 26.

- acinifolia. 3.
- agrestis. 1.
- alpina. 1.
- Anagallis-aquatica. 1.
(m. Ehrh.)
- aphylla. 3.
- arvensis. 1.
- austriaca. 3.
- Beccabunga. 1. (m.
Ehrh.)
- bellidioides. 3.
- biloba.
- Bonarota = Paedarota
Bonarota.
- Chamaedrys. 1.
- fruticulosa. 3.
- hederaefolia. 1.
- hybrida. 1.
- incana. 1.
- latifolia. 1.
- longifolia. 1.
- marilandica = Polypremum procumbens.
- maritima. 1.
- montana. 2.
- multifida. 3.
- officinalis. 1.
- paniculata. 3.
- pectinata. 3.
- peregrina. 1.
- pilosa = V. Chamaedrys.
- pinnata. 3. (m. L. f.)
- prostrata. 3.
- romana. 1.
- scutellata. 1.
- serpyllifolia. 1.
- sibirica. 3.
- spicata. 1.
- spuria. 1. (m. L. f.)
- Teucrium.
- triphyllous. 1.
- verna. 1.
- virginica. 1.

VIBURNUM. 379.

- acerifolium. 1.
- cassinoides. 3.
- dentatum. 1.
- Lantana. 1.

VIBURNUM :—

- Dentago. 1.
- nudum.
- Opulus. 1.
- var. roseum.
- prunifolium. 1.
- Tinus. 1.

VICIA. 906.

- benghalensis. 1.
- biennis. 1.
- bithynica. 3.
- cassubica. 1.
- Cracca. 1.
- dumetorum. 1.
- Faba. 1.
- hybrida. 1.
- Lathyroides. 1.
- lutea. 1.
- narbonensis. 1.
- Nissoliana. 1.
- onobrychioides. 1.
- peregrina. 1.
- pisiformis. 1.
- sativa. 1.
- var. angustifolia.
- var. nigra.
- sepium. 1.
- sylvatica. 1.

VINCA. 299.

- lutea.
- major. 1.
- minor. 1.
- parviflora.
- rosea. 3.

VIOLA. 1052.

- arborea.
- arborescens.
- biflora. 1.
- calcarata.
- Calceolaria.
- canadensis. 1.
- canina. 3.
- cenisia.
- cornuta.
- diandra.
- enneasperma.
- grandiflora. 3.
- hirta. 1.
- Hybanthus.

VIOLA :—

- Ipecacuanha*.
- lanceolata*. 1.
- mirabilis*. 1.
- montana*. 1.
- odorata*. 1.
- oppositifolia*.
- palmata*. 1.
- palustris*. 1.
- pedata*. 1.
- pinnata*. 1.
- primulifolia*. 1.
- suffruticosa*.
- tricolor*. 1.
- uniflora*. 1.

VIRECTA. 212.

- virens*. [=biflora,
Linn. f.]

VISCUM. 1166.

- album*. 1.
- capense*, Suppl. (m. L. f.,
desc. verso a L. patr.)
- opuntioides*. 3.
- purpureum*. 3.
- rubrum*.
- terrestre*. 1.
- verticillatum*. 3.

VITEX. 811.

- Agnus-castus*. 1.
- Negundo*. 1.
- pinnata*. 1.
- trifolia*. 1.

VITIS. 281.

- arborea*. 1.
- corinthiaca*. MS.
- heptaphylla*.
- indica*. 3.
- Labrusca*. 1.
- laciniosa*. 1.
- trifolia*.
- vinifera*. 1.
- var. *apyrena*.
- vulpina*. 1.

VOLKAMERIA. 809.

- aculeata*. 1.
- inermis*. 1.
- scandens*. (m. L. f.)
- serrata*.

VOLVOX. —

- globator*.

WACHENDORFIA. 64.

- hirsuta*.
- paniculata*.
- thyrsiflora*.
- umbellata*.
- villosa* = *Gladiolus*
plicatus?

WALTHERIA. 852.

- americana*. 3.
- angustifolia*.
- indica*. 1.

WEINMANNIA. 508.

- pinnata*. 3. (m. L. f.)

WILLICHIA. —

- repens*.

WINTERA. 696. (manu

- Smithii*). Cf. *DRIMYS*
[Forst.] m. L. patris.

WINTERANIA. 618.

- Canella*. 3.

WITSENIA [Thunb.]. 57.

- maura* (pl.).

XANTHIUM. 1113.

- fruticosum*. Suppl.
- orientale*. 3.
- spinosum*. 1.
- strumarium*. 1.

XERANTHEMUM. 990.

- annuum*. 3.
- var. *inapertum*.
- var. *orientale*.
- canescens*.
- ciliatum*.
- erucifolium*.
- imbricatum*.
- paniculatum*. (m. L. f.)
- proliferum*.
- recurvatum*. Suppl.
- retortum*. 1.
- sesamoides*. 3.
- speciosissimum*.
- spinosum*.

XERANTHEMUM :—

- Staehelina.* 3.
variegatum. (m. L. f.)
vestitum. 1.
virgatum.

XIMENIA. 491.

- aegyptiaca.*
americana (pl. ?).
inermis.

XYLOPHYLLA. —

- latifolia* = *Phyllanthus*
epiphyllanthus.
longifolia.

XYLOPIA. 1077.

- glabra.*
muricata. 3.

XYLOPICRUM. —

- muricata.* (m. Sol.) =
Xylopi muricata.

XYRIS. 67.

- indica.* 1.

YUCCA. 441.

- aloifolia.*
Draconis; cf. *aloifolia*,
Dracaena Draco.
filamentosa.
Gloriosa. 3.

ZAMIA. —

- pumila.*

ZANNICHELLIA. 1085.

- palustris.* 1.

ZANONIA. 1179.

- indica* (pl.).

ZANTHOXYLUM. 1171.

- Clava-Herculis.* 1. (m.
 Sol.)

ZANTHOXYLUM :—

- trifoliatum.* 1.

ZEA. 1096.

- Mays.* 1.

ZINNIA. 1019.

- multiflora.* 3.
pauciflora. 3.
peruviana.

ZIZANIA. 1119.

- aquatica.* 1.
palustris.
terrestris.

ZIZIPHORA. 39.

- acinoides.* 1.
capitata. 1.
hispanica. 3.
tenuior. 1.

ZOËGEA. 1028.

- capensis.* Suppl.
Leptaurea. 3.

ZOSTERA. 1083.

- marina.* 1.
oceanica.

ZYGOPHYLLUM. 544.

- aestuans.*
album. 3.
arborescens [Jacq.].
coccineum.
Fabago. 1.
fulvum.
microphyllum. Suppl.
Morgsana. 1.
Nitraria = *Nitraria*
Schoberi?
sessilifolium. 3.
simplex.
spinosum.

